SOUTHERN CALIFORNIA

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MEETING OF THE

TRANSPORTATION CONFORMITY WORKING GROUP

Tuesday, March 25, 2008
10:00 a.m. – 12:00 p.m.

Conference Call #: 1-888-316-9409, Code: 62600

SCAG Offices
818 West 7th, 12th Floor
Riverside A Conference Room
Los Angeles, CA 90017
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If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Jonathan Nadler at 213.236.1884 or nadler@scag.ca.gov

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Transportation Conformity Working Group

AGENDA

			PAGE #	TIME
1.0	CALL TO ORDER	Michael Litschi, OCTA		
2.0	PUBLIC COMMENT PERIOD **Members of the public desiring to speak on an agenda item or items not on the agenda, but within the purview of the TCWG, must fill out a speaker's card prior to speaking and submit it to the Staff Assistant. A speaker's card must be turned in before the meeting is called to order. Comments will be limited to three minutes. The Chair may limit the total time for comments to twenty (20) minutes.**			
3.0	CONSENT CALENDAR			
3.1	TCWG Minutes of February 26, 2008 **Attachment**		1	
4.0	INFORMATION ITEMS			
4.1	RTIP Update	**John Asuncion, SCAG**		**5 minutes**
4.2	SIP Update	**Karina O'Connor, EPA** **Dennis Wade, ARB**		**15 minutes**
4.3	RTP Update	**Naresh Amatya, SCAG** **Jonathan Nadler, SCAG**		**30 minutes**
4.4	Review of PM Hot Spot Interagency Review Forms **Attachment**	**TCWG Discussion**		**30 minutes**
4.5	Review of Qualitative PM Hot Spot Analysis **Attachment**	**TCWG Discussion**		**10 minutes**
4.6	Projects Requiring Follow-up **Attachment**	**Andrew Yoon, Caltrans** **TCWG Discussion**		**10 minutes**
5.0	INFORMATION SHARING			**5 minutes**

AGENDA

	PAGE #	TIME

6.0 ADJOURNMENT

The next meeting of the Transportation Conformity Working Group will be on Tuesday, April 22, 2008 at the SCAG office in downtown Los Angeles.

3.1 MINUTES

TRANSPORTATION CONFORMITY WORKING GROUP
of the
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

February 26, 2007
Minutes

THE FOLLOWING MINUTES ARE A SUMMARY OF THE MEETING OF THE TRANSPORTATION CONFORMITY WORKING GROUP. AN AUDIOCASSETTE TAPE OF THE ACTUAL MEETING IS AVAILABLE FOR LISTENING IN SCAG'S OFFICE.

The Meeting of the Transportation Conformity Working Group was held at the SCAG office in Los Angeles.

In Attendance:

Abrishami, Lori	MTA
Cheng, Herman	MTA
Cooper, Keith	Jones & Stokes
Litschi, Michael	OCTA
Walecka, Carla	TCA
Williams, Leann	Caltrans Dist. 7

SCAG Staff

Acebo, Mervin
Asuncion, John
Del Rosario, Sheryll
Nadler, Jonathan
Patsaouras, Sylvia
Sherwood, Arnie

Via Teleconference:

Ambrosi, Rafael	Caltrans District 11
Brady, Mike	Caltrans Headquarters
Cacatian, Ben	Ventura County Air Pollution
Chandon, Nina	Caltrans District 8
Yoon, Andrew	Caltrans District 7
Fagan, Paul	Caltrans District 8
Gallo, Ilene	Caltrans
Higgins, Kathryn	SCAQMD
Jeffery, Edison	Caltrans District 8
Johnson, Sandy	Caltrans District 11
Lay, Keith	LSA & Associates

TRANSPORTATION CONFORMITY WORKING GROUP
of the
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

February 26, 2007
Minutes

Lopez, Rosa	IVAG
Noch, Michelle	FHWA
O'Connor, Karina	EPA Region 9
Sells, Evyonne	SCAQMD
Tavitas, Ronnie	Caltrans Headquarters

1.0 CALL TO ORDER

Lori Abrishami, MTA, called the meeting to order at 10:07 a.m.

2.0 PUBLIC COMMENT PERIOD

There were no comments.

3.0 CONSENT CALENDAR

3.1 Approval Item

3.1 TCWG January 22, 2008 Meeting Minutes

The minutes were approved.

4.0 INFORMATION ITEMS

4.1 RTIP Update

John Asuncion, SCAG, stated that the 2006 RTIP Amendment #12 received federal approval on February 12, 2008. Staff is currently working on processing an administrative and formal amendment and hope to deliver this to Caltrans sometime later in the week. Staff is also continuing to work on the 2008 RTIP development and plans on completing the project analysis of all the projects in the TIP by February 29th.

4.2 AQMP/SIP

Karina O'Connor, EPA, discussed the status of EPA's review of the transportation emission budgets for the South Coast PM 2.5 and 8-hr Ozone plans and those in the Early Progress Plans for other areas in the SCAG

region. EPA has discussed their concerns with certain technical aspects of the South Coast budgets, and is working with ARB, SCAQMD, and SCAG to resolve the issue.

4.3 RTP Update

Naresh Amatya, SCAG, stated that the public comment period closed on February 19th. Staff is currently preparing responses to the comments.

Several comments received concerned the 2008 RTP baseline and policy growth forecasts. Mr. Amatya briefly summarized their differences. The Baseline Growth Forecast for the 2008 RTP represents a growth forecast based on current and expected demographic and economic trends, as well as previously adopted local land use policies within the SCAG region. The Draft Policy Growth Forecast incorporates existing and emerging development patterns that maximize the benefits of existing and planned transportation investments. Various stakeholders have expressed that that they would like to see the Baseline Forecast adopted. Staff is going to take this issue in the March to the CEHD policy committee to have a discussion on what policy growth forecast the region should utilize as the RTP moves forward.

Mr. Amatya also discussed a couple of major projects that staff is working on. One project is the Orangeline, which is a segment of a high speed rail system that connects southern Orange County with Los Angeles County. OCTA Board has taken an action to prevent the consideration of using any Metrolink right-of-way. Staff has asked the Orangeline JPA to reassess their financial plan to account for the planning needs for the right-of-way.

There has also been discussion on the CETAP corridors specifically related to Corridor B, which is alignment that connects Orange County with Riverside County along an unspecified alignment. Currently the consensus between the agencies is to move forward with this project in the RTP as a PE and Environmental project and not as a capital project. Staff will be considering removing the capital part of the project from the final RTP and will be conducting the necessary analytical work to validate this.

A TCC workshop has been scheduled for March 19th, 9:00 a.m., at SCAG to discuss the key comments that have been received and the results of some of the analytical work that has been done prior to taking the RTP to the Regional Council for adoption on April 3rd. The final draft of the RTP will be mailed out to the Regional Council a week prior to the April 3rd meeting.

Jonathan Nadler, SCAG, informed the TCWG that the formal conformity analysis for the RTP will be based on the plan as proposed for adoption. In terms of the emissions budgets, there are issues that staff is working through involving EPA and ARB.

4.4 Review of PM Hot Spot Interagency Review Form

1) RIV070305 - I-215 interstate widening

Tentatively not a POAQC - Pending determination from the FHWA and ARB.

2) LA0B311 – Foothill Transit Park-and-Rise structure on Vincent Ave. In West Covina

Not a POAQC.

4.5 Projects Requiring Follow-Up

RIV031218 - Mid County Parkway in Riverside

Sheryll Del Rosario, SCAG, stated that the project was originally submitted in August 2007. A revised version of the qualitative analyses was submitted in December 2007. Staff received another revised version February 24 that includes the PM 2.5 re-entrained dust discussion. The revised version is posted on SCAG's website.

Keith Lay, LSA & Associates, stated that primary purpose of the discussion was to ensure that all comments prior were incorporated into the final document. FHWA did not have additional comments. EPA provided comments regarding including re-entrained road dust as part of the PM2.5 analysis. The document was determined acceptable for NEPA circulation,

pending final submittal of the revised analysis that incorporated EPA's comments.

5.0 CHAIR'S REPORT

No new items to report.

6.0 INFORMATION SHARING

Arnie Sherwood, SCAG, announced that he would be teaching a course on conformity and transportation air quality in Sacramento on March 19th for Caltrans staff.

Jonathan Nadler announced that Michael Litschi, OCTA, would be the new Chairman of the TCWG.

6.0 ADJOURNMENT

Lori Abrishami adjourned the meeting at 10:55 a.m.

The next Transportation Conformity Working Group meeting will be held on March 25, 2008 at the SCAG office in Los Angeles.

4.4 REVIEW OF PM HOT SPOT INTERAGENCY REVIEW FORMS

RTIP ID# *(required)* LA0F098

TCWG Consideration Date March 25, 2008

Project Description *(clearly describe project)*
The project proposes to construct one/two-lane bridge structure, branching off Southbound of Route 605 to Eastbound of Route 10 at-grade connector ramp. Four Alternatives are proposed for the project:

Alternative 1 – No Build
Alternative 2 – Construct a one-lane elevated bridge structure; re-stripe I-10 E/B mainline to provide seven non-standard lanes (minimum standard build).
Alternative 3 – Construct a two-lane elevated bridge structure connecting to a new auxiliary lane along E/B I-10.
Alternative 4 – Construct a one-lane elevated bridge structure (non-standard build).

Type of Project *(use Table 1 on instruction sheet)*

Change to existing state highway

County	**Narrative Location/Route & Postmiles**
Los Angeles	Construct a direct connector from the S/B 605 to E/B 10, LA-10-PM 31.1/32.3 LA-605-PM-R20.2/20.6 **Caltrans Projects – EA#** 24540

Lead Agency: Caltrans

Contact Person	**Phone#**	**Fax#**	**Email**
Andrew Yoon	213-897-6117	213-897-1634	Andrew_yoon@dot.ca.gov

Hot Spot Pollutant of Concern *(check one or both)* **PM2.5 X** **PM10 X**

Federal Action for which Project-Level PM Conformity is Needed *(check appropriate box)*

Categorical Exclusion (NEPA)		**EA or Draft EIS**	**FONSI or Final EIS**	**PS&E or Construction**	**Other**
	X				

Scheduled Date of Federal Action: January 14, 2009

NEPA Delegation – Project Type *(check appropriate box)*

Exempt	**Section 6004 – Categorical Exemption**		**Section 6005 – Non-Categorical Exemption**
		X	

Current Programming Dates *(as appropriate)*

	PE/Environmental	**ENG**	**ROW**	**CON**
Start	Sept. 07	Feb. 09	Mar. 09	Aug. 11
End	Jan. 09	Nov. 10	Mar. 11	Aug. 13

Project Purpose and Need (Summary): *(attach additional sheets as necessary)*

The purpose of this project is to eliminate weaving conflicts on a short and joint segment along the existing connectors (W/B I-10 to S/B I-605 and S/B I-605 to E/B I-10); and to separate those traffic movements from each other to reduce queues and accidents caused by the weaving. The project proposes to replace the existing at-grade S/B I-605 to E/B I-10 connector with a one- or two-lane bridge structure (depending of the Alternatives) in order to separate this movement from the traffic on the W/B I-10 to S/B I-605 connector.

A joint and short weaving section of the existing at-grade S/B I-605 to E/B I-10 loop connector with the W/B I-10 to S/B I-605 connector has resulted in queuing (350m-650m) on the outer lane of the W/B I-10 during the peak and/or off-peak commute hours as well as causing weaving-related accidents within the project limits.

An improvement for this segment is needed to eliminate the queue on the existing W/B I-10 mainline; to reduce the accidents within this short and joint weaving section; and to improve the operation of the W/B I-10 to S/B I-605 connector as well as S/B I-605 to E/B I-10 connector.

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*

The project is surrounded by one and two-story detached residences located southeast of the I-10/I-605 interchange. The closest residences are located within 65 feet of the I-10 eastbound shoulder. The project is also surrounded by parks, a hospital, schools, motels as well as retail and commercial stores. The closest schools to the project site approximately 0.5 miles to 1 mile to the north of the project's east limit. The nearest hospital is approximately 0.5 mile distance south of the project's east limit. Several motels and retail/commercial stores exist within a 0.1 mile distance north of the project's east limit (eastbound I-10). Park areas north and south of the I-605/I-10 interchange, within 0.5 miles of the proposed project area consist of outdoor recreational facilities.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Opening Year: 2014

Item	*Description*	*No-build*		*Build (includes Alternatives 2, 3, & 4)*	
		ADT	*% Trucks/Truck ADT*	*ADT*	*% Trucks/Truck ADT*
Connector	S/B 605 to E/B 10	14,032	9/2,130	14,032	9/2,130
Connector	W/B 10 to S/B 605	41,280	8/6,100	41,280	8/6,100

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Horizon Year: 2035

Item	*Description*	*No-build*		*Build (includes Alternatives 2, 3, & 4)*	
		ADT	*% Trucks/Truck ADT*	*ADT*	*% Trucks/Truck ADT*
Connector	S/B 605 to E/B 10	14,032	9/2,130	14,032	9/2,130
Connector	W/B 10 to S/B 605	41,280	8/6,100	41,280	8/6,100

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Opening Year 2014:

		No-build			*Build (includes Alternatives 2, 3, & 4)*		
Item	*Description*	*ADT*	*LOS*	*% Trucks/Truck ADT*	*ADT*	*LOS*	*% Trucks/Truck ADT*
Mainline	E/B I-10 PM (30.30)	124,390	D	6.9/16,000	124,390	D	6.9/16,000
Mainline	W/B I-10 PM (30.30)	126,142	F	6.9/16,200	126,142	F	6.9/16,200
Mainline	E/B I-10 PM (31.22)	126,068	C	6.9/16,200	126,068	C	6.9/16,200
Mainline	W/B I-10 PM (31.22)	99,871	C	6.9/12,800	99,871	C	6.9/12,800
Mainline	E/B I-10 PM (32.01)	172,934	C	6.9/22,200	172,934	C	6.9/22,200
Mainline	W/B I-10 PM (31.72)	120,858	F	6.9/15,500	120,858	F	6.9/15,500
Mainline	N/B I-605 PM (19.05)	91,991	C	11.9/20,600	91,991	C	11.9/20,600
Mainline	S/B I-605 PM (22.04)	65,166	C	11.9/14,600	65,166	C	11.9/14,600

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Horizon Year: 2035

		No-build			*Build (includes Alternatives 2, 3, & 4)*		
Item	*Description*	*ADT*	*LOS*	*% Trucks/Truck ADT*	*ADT*	*LOS*	*% Trucks/Truck ADT*
Mainline	E/B I-10 PM (30.30)	148,355	C	6.9/16,000	148355	C	6.9/16,000
Mainline	W/B I-10 PM (30.30)	150,445	E	6.9/16,200	150445	E	6.9/16,200
Mainline	E/B I-10 PM (31.22)	150,357	B	6.9/16,200	150357	B	6.9/16,200
Mainline	W/B I-10 PM (31.22)	119,113	C	6.9/12,800	119113	C	6.9/12,800
Mainline	E/B I-10 PM (32.01)	206,252	C	6.9/22,200	206252	C	6.9/22,200
Mainline	W/B I-10 PM (31.72)	144,143	F	6.9/15,500	144143	F	6.9/15,500
Mainline	N/B I-605 PM (19.05)	104,141	D	11.9/20,600	104141	D	11.9/20,600
Mainline	S/B I-605 PM (22.04)	73,772	C	11.9/14,600	73772	C	11.9/14,600

Describe potential traffic redistribution effects of congestion relief *(impact on other facilities)*

The proposed project was initiated to eliminate the weaving conflicts on this segment, which will require the W/B I-10 to S/B I-605 and S/B I-605 to E/B I-10 connectors be separated from each other to avoid using the joint weaving segment to change between freeways. The new bridge structure itself will not cause any redistribution of traffic but rather reduce accidents within this weaving section as well as improving the operation of the W/B I-10 to S/B I-605 connector.

Comments/Explanation/Details *(attach additional sheets as necessary)*

Based on the traffic data for the connectors, the proposed project would not qualify as a project of air quality concern (POAQC) because the project does not increase the number of diesel trucks or cars that would utilize the proposed facility from the No-Build to Build conditions for the opening and horizon years; but rather improves operations by eliminating weaving and queues caused by them, resulting in reduction of emissions. Thus, the proposed project would not worsen the existing violations or delay timely attainment; and thus would not be considered as a POAQC.

RTIP ID# *(required)*:ORA000161

TCWG Consideration Date: March 28, 2008

Project Description *(clearly describe project)*
The project is located in the City of Costa Mesa in Orange County, California. Specifically, it is along State Route 55/Newport Boulevard and extends from about 460 feet north of 19th Street to 17th Street with minor work south of 17th Street for restriping. The 0.68-mile highway segment within the project limits is a six-lane divided roadway. The project limits include five signalized intersections, along with several unsignalized T-intersections where local streets intersect either the northbound or the southbound lanes of the highway. The project proposes to add a fourth northbound lane from 17th Street to 19th Street and a fourth southbound lane from the project northern limit to Broadway. Curb locations would not change along the northbound lanes between Old 17th Street and 19th Street, or along the southbound lanes between Harbor Boulevard and 19th Street. Existing curbside on-street parking along the northbound lanes would be retained from 17th Street to Flower Street. To accommodate the addition of lanes, median reconfigurations, minor curb relocations along the southbound lanes of Newport Boulevard, and lane-width reductions are proposed. In addition to roadway improvements, spot sidewalk and curb reconstruction and enhancements will be evaluated where needed to meet Americans with Disabilities Act (ADA) requirements, and landscaping/aesthetic improvements will be made.

Type of Project *(use Table 1 on instruction sheet)*
Change to existing state highway

County	**Narrative Location/Route & Postmiles** Route 55 (Newport Boulevard), PM 1.4 to 2.1
Orange	**Caltrans Projects – EA#** 098401

Lead Agency: City of Costa Mesa

Contact Person	**Phone#**	**Fax#**	**Email**
David Sorge	(714) 754-5183	(714) 754-5028	ddsorge@ci.costa-mesa.ca.us

Hot Spot Pollutant of Concern *(check one or both)* **PM2.5** X **PM10** X

Federal Action for which Project-Level PM Conformity is Needed *(check appropriate box)*

Categorical Exclusion (NEPA)	**EA or Draft EIS**	**FONSI or Final EIS**	X **PS&E or Constr uction**	**Other**

Scheduled Date of Federal Action: June 2008

NEPA Delegation – Project Type *(check appropriate box)*

Exempt	**Section 6004 – Categorical Exemption**	X **Section 6005 – Non-Categorical Exemption**

Current Programming Dates *(as appropriate)*

	PE/Environmental	**ENG**	**ROW**	**CON**
Start	2/2003	(ongoing)	(ongoing)	9/2008
End	6/2005	6/2008	6/2008	6/2009

Project Purpose and Need (Summary): *(attach additional sheets as necessary)*

The project need is driven by current and future operational deficiencies, travel delays, roadway accidents, deficient pedestrian access and poor walkway conditions along SR-55/Newport Boulevard. The purpose of the project is to improve traffic operations, decrease delays, decrease accidents, improve safety and pedestrian conditions, and promote a viable downtown area by increasing roadway capacity and improving sidewalk conditions and connectivity.

Traffic Capacity/Operational Deficiencies

The existing and future ADT volumes on study roadway segments along Newport Boulevard are shown on Figures 3 and 6 (attached). Existing (2002) ADT for the segment north of 19th Street is 100,000 vehicles, while ADT south of 19th Street and north of 17th Street varies from 74,000 to 77,000 vehicles. These are very high traffic volumes for this type of highway facility, indicating this section of Newport Boulevard is approaching capacity. The high ADT volumes result in existing unacceptable levels of service, operational deficiencies, and congestion at key intersections which will worsen in the future as volumes are predicted to increase, regardless of whether the project is implemented. Caltrans has not employed a specific lowest acceptable LOS for state highway facilities, as they are determined on a case-by-case basis. The City of Costa Mesa has adopted LOS D as the lowest acceptable level of service for peak-hour intersection volumes. Figures 2 and 5 (attached) illustrate the existing and future morning and evening peak-hour intersection turning movement volumes at the five study intersections, on which the LOS analyses are based. Based on 2002 volumes, the Newport Boulevard/19th Street intersection operates at an unacceptable level of service, LOS E, during both morning and evening peak hours (Table 7, attached). Two other intersections, Newport Boulevard/18th Street and Newport Boulevard/17th Street, operate at LOS D. During the morning peak period, primary delay at all five study intersections is due to northbound congestion. During the evening peak period, primary delay results from northbound congestion at the intersections of Newport Boulevard/19th Street, Newport Boulevard/Broadway, Newport Boulevard/18th Street/Rochester Street, and Newport Boulevard/17th Street. Year 2025 LOS at the five study intersections during the morning and evening peak hours is expected to worsen to an unacceptable level due to the increase in traffic volumes (Table 7, attached). One of the purposes of the proposed project is to reduce traffic congestion at all study intersections and improve or maintain LOS compared to existing conditions in the project area by increasing the traffic-carrying capacity of Newport Boulevard. Delay is expected to decrease at all study intersections with the proposed improvements.

Safety

According to Traffic Accident Surveillance and Analysis System (TASAS) data, actual accident rates in the project area from April 1999 through March 2002 exceeded the state averages in all categories for a similar type of roadway.

Actual and Average Accident Rates in Project Area (April 1999 to March 2002)

Route Segment	Actual			State Average		
	Total	Fatal	Fatal + Injury	Total	Fatal	Fatal + Injury
Newport Boulevard – 17th Street to 19th Street	3.37	0.020	2.29	2.27	0.018	1.06

Rates are per million vehicle miles

The TASAS data indicates that a majority of the accidents occurring within the project limits were either rear-end (61 percent) or broadside (20 percent) collisions. The primary collision factor for the majority of these accidents was due to speeding (47 percent). Recent City data summarizing accidents occurring between January 1, 2000, and December 31, 2002, indicate that the three intersections documented for the highest number of collisions within the City of Costa Mesa were along Newport Boulevard at 19th Street (84 accidents), 17th Street (62 accidents), and Harbor Boulevard (55 accidents). A majority of the accidents were rear-end collisions that occurred due to unsafe driving speeds. Based on the TASAS and City accident data, a majority of the accidents were rear-end or broadside collisions. These types of accidents typically

indicate an elevated congestion-level, a condition under which motorists may tend to disregard traffic controls and speed up through intersections to avoid additional delay. The additional fourth through lane proposed by the project would reduce individual intersection delay and is expected to decrease accident occurrences of these types.

Pedestrian Conditions

Pedestrian accessibility is deficient along the west side of Newport Boulevard from 17th Street to the commercial center south of 18th Street/Rochester Boulevard, as there is no sidewalk along southbound Newport Boulevard. Additionally, portions of sidewalks and curbs along Newport Boulevard have damaged concrete, and many driveways and curb ramps along the northbound side of the roadway do not meet ADA requirements. Improvements to sidewalks and pedestrian connectivity would improve pedestrian safety and likely increase pedestrian use of the downtown area.

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*

The land uses immediately adjacent to the project are typical of an urban downtown area. They mainly include retail and light commercial developments in strip malls. Example facilities include restaurants; clothing and furniture stores; and gas stations. See attached aerial photos.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Because affected facility has closely spaced signalized intersections, see below section for data for major intersections. See attached Table 7, "Intersection LOS Comparison," from approved project *Traffic Impacts Analysis* for LOS data.

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Because affected facility has closely spaced signalized intersections, see below section for data for major intersections. See attached Table 7, "Intersection LOS Comparison," from approved project *Traffic Impacts Analysis* for LOS data.

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

17th Street: AADT=81,000*, Truck ADT=2900* (3.6%), Year 2009

19th Street: LOS=F, AADT=81,000*, Truck ADT=2900* (3.6%), Year 2009

* These traffic volumes apply to both the No Build and Build alternatives

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

17th Street: LOS=F, AADT=81,000*, Truck ADT=2900* (3.6%), Year 2025

19th Street: LOS=F, AADT=81,000*, Truck ADT=2900* (3.6%), Year 2025

* These traffic volumes apply to both the No Build and Build alternatives

Describe potential traffic redistribution effects of congestion relief *(impact on other facilities)*

No redistribution effects are expected, as there are no nearby parallel arterials. Due to the additional capacity that will be provided, implementation of this project is expected to improve traffic flows on State Route 55/Newport Boulevard through Costa Mesa.

Comments/Explanation/Details *(attach additional sheets as necessary)*
Please see attached for an aerial photo exhibits showing the project area, the adjacent land uses, and the street network in the vicinity of the project. Also see attached table and exhibits from Traffic Impacts Analysis, analysis regarding particulate matter, and copy of approved project *Air Quality Technical Study.*

Particulate Matter (PM_{10} and $PM_{2.5}$) Analysis

The proposed project is within a nonattainment area for federal $PM_{2.5}$ and PM_{10} standards. Therefore, per 40 CFR Part 93, analyses are required for conformity purposes. However, the EPA does not require hot-spot analyses, qualitative or quantitative, for projects that are not listed in section 93.123(b)(1) as an air quality concern. The project does not qualify as a POAQC because of the following reasons:

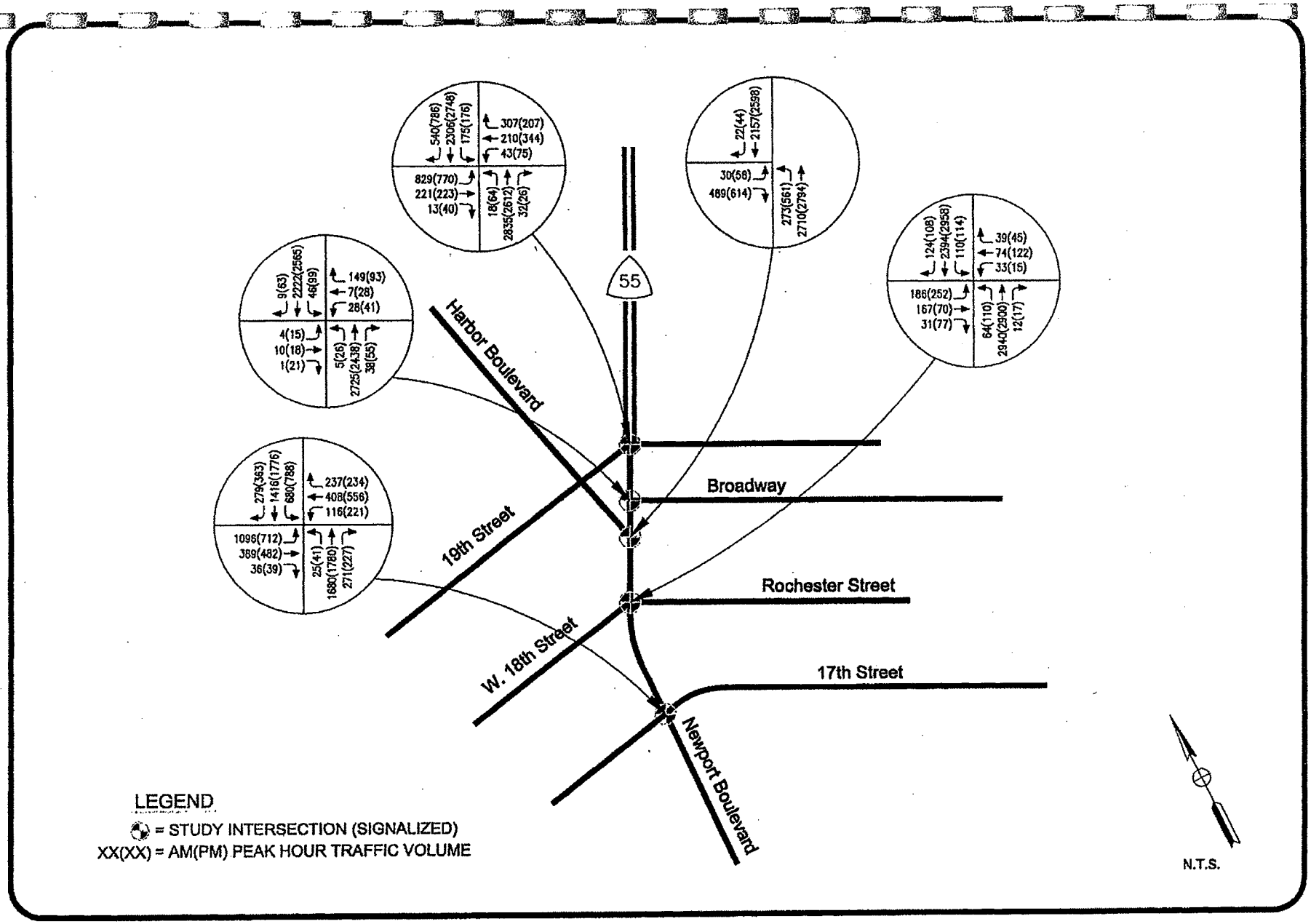
i. The proposed project is not a new or expanded highway project that would have a significant number or a significant increase in diesel vehicles. As stated in the approved project *Traffic Impacts Analysis* and environmental documentation, the proposed project will be providing additional capacity to accommodate anticipated future volumes. As a result, it is assumed that truck traffic volumes along this segment of SR-55 would be the same under both the Build and No-Build conditions. The truck AADT volume (3.6%) is expected to increase from 1900 to 3640. These are below the thresholds for a Project of Air Quality Concern (POAQC). This type of project will improve state highway operations by reducing traffic congestion.

ii. The proposed project does not affect intersections that are at LOS D, E, or F with a significant number of diesel vehicles. Although the project limits do include intersections that are at LOS D, E, and F and will remain at LOS D, E, or F with implementation of the project, as shown in Table 7, "Intersection LOS Comparison" from the approved project *Traffic Impacts Analysis*, none of these intersections has a significant number of diesel vehicles.

iii. The proposed project does not include the construction of a new bus or rail terminal.

iv. The proposed project does not expand an existing bus or rail terminal.

Therefore, the proposed project meets the CAA requirements and 40 CFR 93.116 without any explicit hot-spot analysis. The proposed project would not create a new, or worsen an existing, PM_{10} or $PM_{2.5}$ violation. As stated in the project Air Quality Technical Study: "Less than 5 percent of the vehicles traveling along this project area are diesel trucks. Although the project would not reduce the number of vehicles, it would reduce the idling time of these vehicles. Since diesel exhaust emissions would be highest when a vehicle is idling, this project would result in lower diesel exhaust emissions. This in turn would result in lower toxic risks in the area. It is expected that the traffic volumes in the area would increase 20 percent by the year 2025. Without the proposed project, the emissions and the toxic risk from vehicles in the area would only rise. This project will result in a lowering of the potential toxic risks in the area."

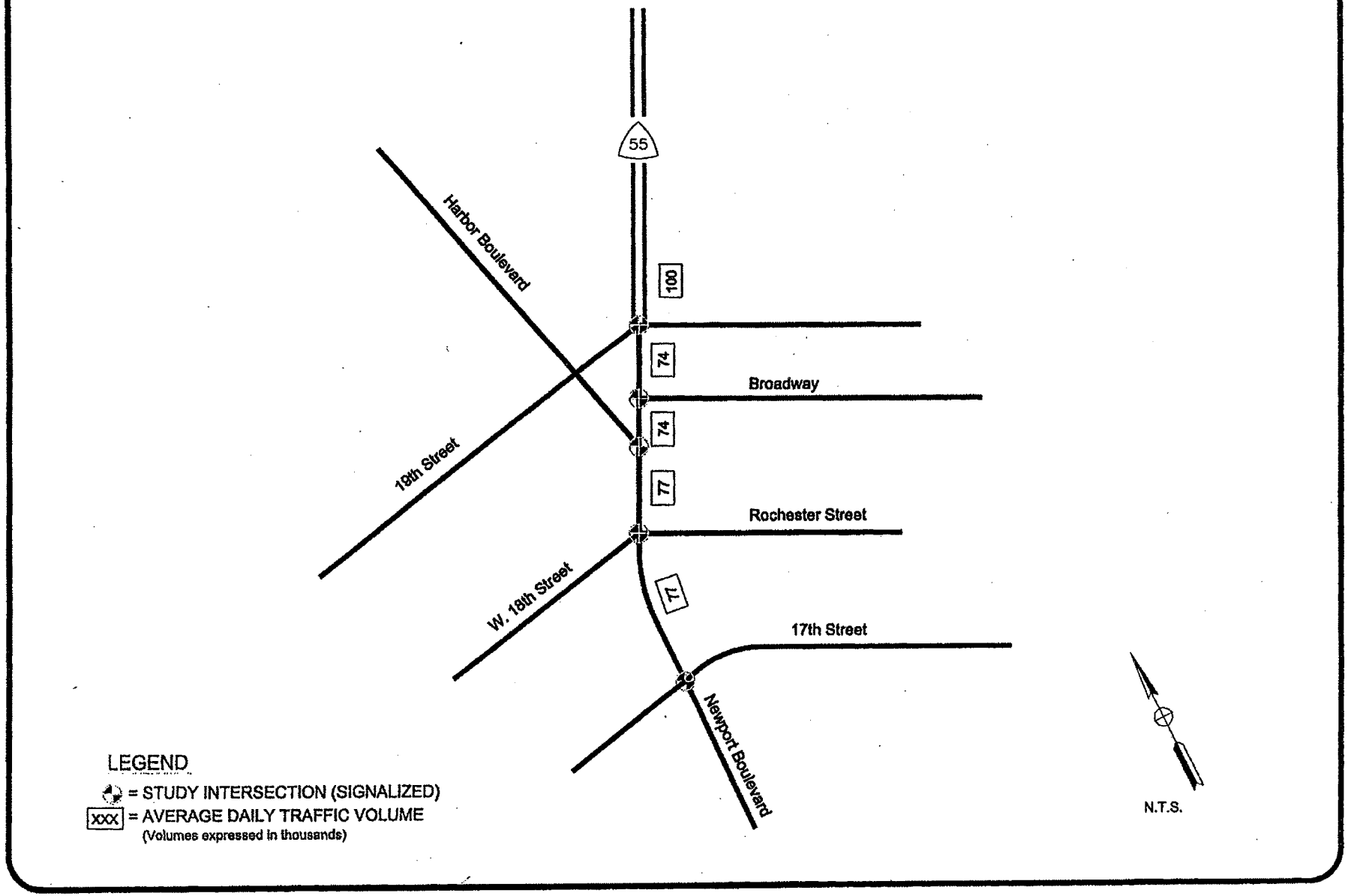


Existing Intersection Turning Movement Volumes

PARSONS

SR-55/Newport Boulevard Improvements

FIGURE 2

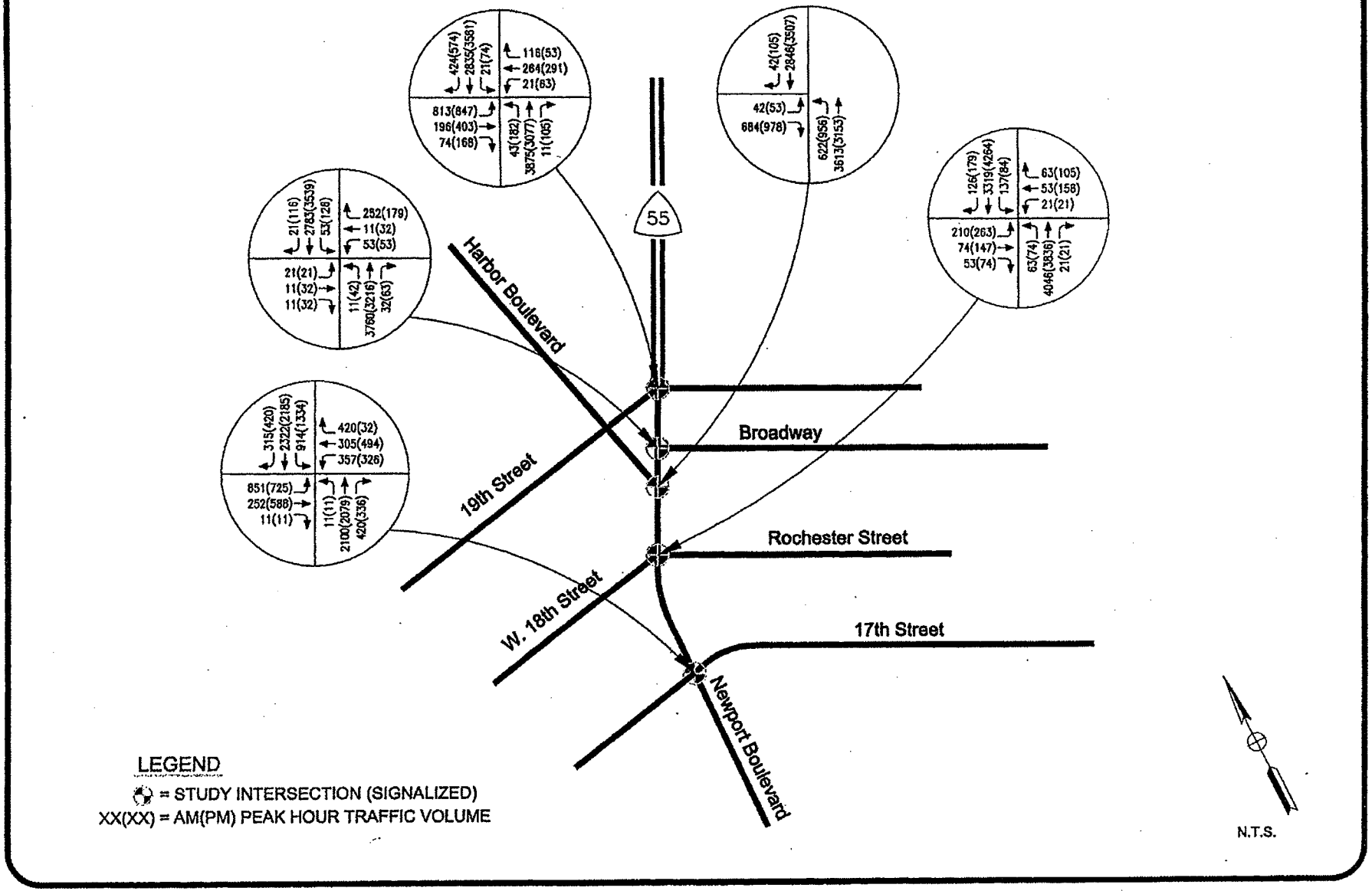


Existing Average Daily Traffic Volumes

PARSONS

SR-55/Newport Boulevard Improvements

FIGURE 3

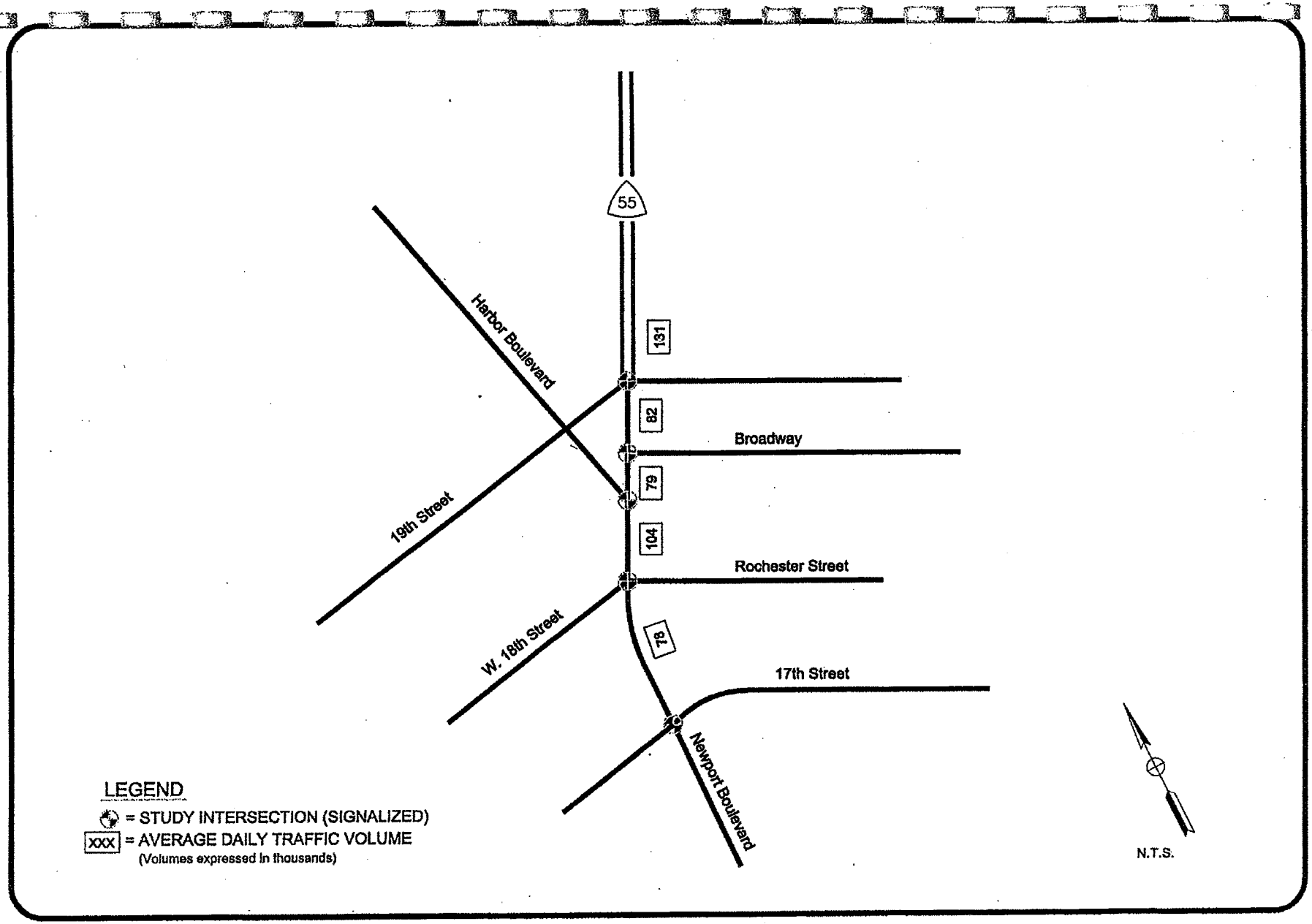


Future (Year 2025) Intersection Turning Movement Volumes

PARSONS

SR-55/Newport Boulevard Improvements

FIGURE 5



Future (Year 2025) Average Daily Traffic Volumes

PARSONS

SR-55/Newport Boulevard Improvements

FIGURE 6

TABLE 7
Intersection LOS Comparison

HCM METHODOLOGY

Intersection	Existing				No-Build (year 2025)				Build (year 2025)				Change in Delay[1]	
	AM		PM		AM		PM		AM		PM			
	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	AM	PM
Newport Blvd. @ 19th Street	36.3	D	33.5	C	60.1	E	61.1	E	23.7	C	29.3	C	-36.4	-31.8
Newport Blvd. @ Broadway	11.4	B	13.4	B	26.9	C	24.5	C	13.5	B	19.8	B	-13.4	-4.7
Newport Blvd. @ Harbor Blvd.	18.5	B	29.4	C	45.1	D	132.7	F	38.0	D	130.8	F	-7.1	-1.9
Newport Blvd. @ 18th Street	20.0	B	23.1	C	61.4	E	82.8	F	23.0	C	63.6	E	-38.4	-19.2
Newport Blvd. @ 17th Street	43.3	D	47.8	D	105.9	F	89.5	F	93.7	F	78.4	E	-12.2	-11.1

ICU METHODOLOGY

Intersection	Existing				No-Build (year 2025)				Build (year 2025)				Change in ICU[3]	
	AM		PM		AM		PM		AM		PM			
	ICU[3]	LOS[2]	ICU[3]	LOS[2]	ICU[3]	LOS[2]	ICU[3]	LOS[2]	ICU[3]	LOS[2]	ICU[3]	LOS[2]	AM	PM
Newport Blvd. @ 19th Street	0.939	E	0.901	E	1.049	F	1.116	F	0.847	D	0.929	E	-0.202	-0.187
Newport Blvd. @ Broadway	0.711	C	0.677	B	1.008	F	0.929	E	0.810	D	0.929	E	-0.198	0.000
Newport Blvd. @ Harbor Blvd.	0.656	B	0.788	C	0.868	D	1.129	F	0.868	D	1.129	F	0.000	0.000
Newport Blvd. @ 18th Street	0.859	D	0.868	D	1.071	F	1.191	F	0.859	D	1.191	F	-0.212	0.000
Newport Blvd. @ 17th Street	0.879	D	0.896	D	1.013	F	1.140	F	0.969	E	1.084	F	-0.044	-0.056

[1]Delay expressed in seconds per vehicle
[2]Level of Service
[3]Intersection Capacity Utilization

Note: It should be noted that ICU results are conservative since 1600 vphpl was used as the capacity per lane.

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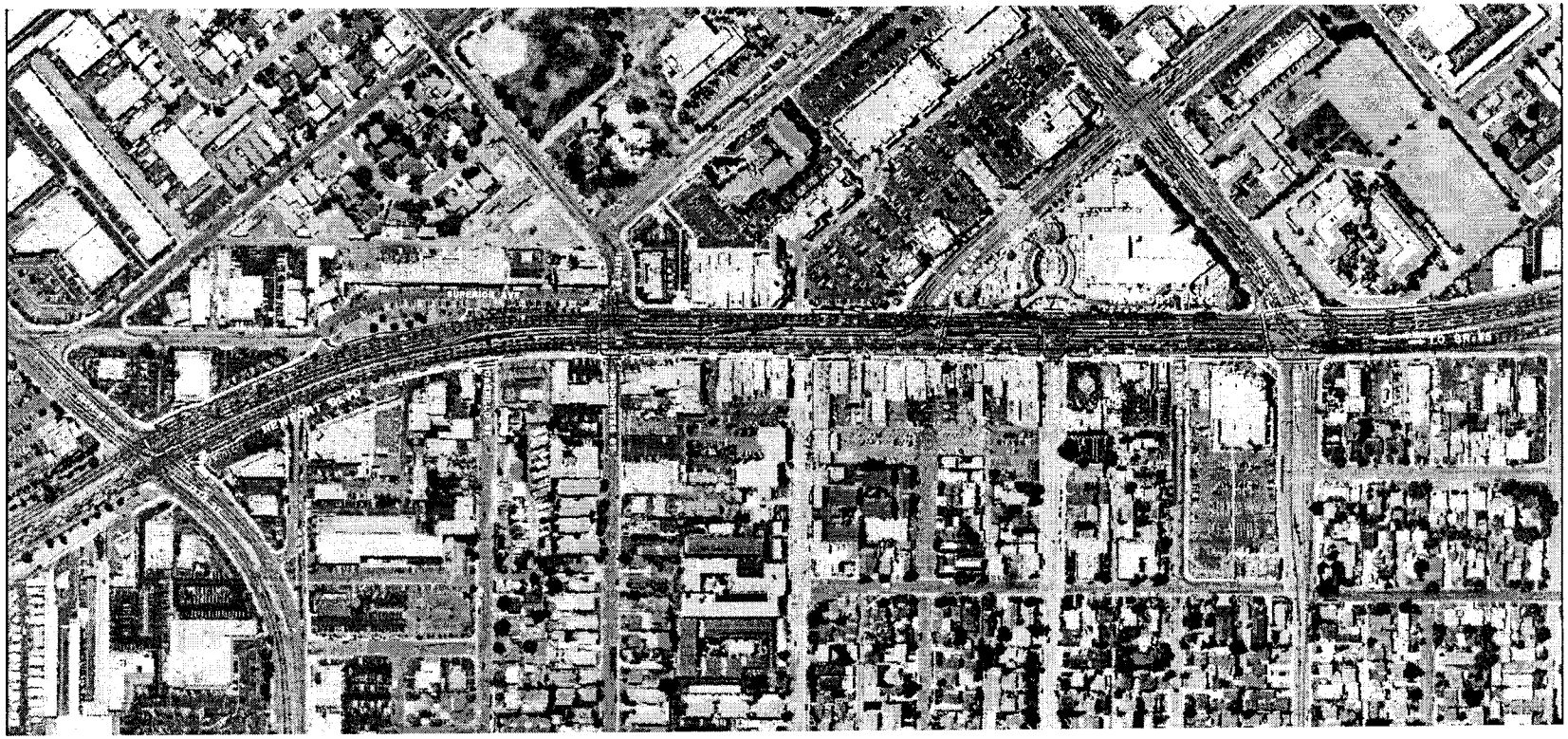

Figure 1
SITE LAYOUT
PROPOSED PROJECT
NO SCALE
MARCH 2008

Figure 1
SITE LAYOUT
PROPOSED PROJECT
NO SCALE
MARCH 2008

FINAL

Air Quality Technical Study

SR-55/Newport Boulevard Improvements

Prepared for:
City of Costa Mesa
Caltrans, District 12
and
Federal Highway Administration

March 2004

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Acronyms

AAM	Annual Arithmetic Mean
AAQS	ambient air quality standard
ADA	Americans with Disabilities Act
AGM	Annual Geometric Mean
APCD	Air Pollution Control Districts
AQMD	Air Quality Management Districts
AQMP	Air Quality Management Plan
ASTM	American Society for Testing and Materials
°C	degrees Celsius
CAA	Clean Air Act
CAAAs	Clean Air Act Amendments
CAAQS	California ambient air quality standards
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CO	carbon monoxide
EPA	United States Environmental Protection Agency
°F	degrees Fahrenheit
ft	feet
km	kilometer
LOS	level of service
m	meters
$\mu g/m^3$	micrograms per cubic meter
mm	millimeters
mph	miles per hour
MPO	Metropolitan Planning Organization
MSL	mean sea level

NAAQS	National Ambient Air Quality Standards
NM	not measured
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
0_3	ozone
Pb	lead
PM_{10}	particulate matter of less than 10 microns in diameter
PM2.5	particulate matter of less than 2.5 microns in diameter
ppm	parts per million
ROG	reactive organic gases
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Program
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_X	oxides of sulfur
SR	State Route
TIP	Transportation Improvement Program
U.S.C.	United States Code
USDOT	United States Department of Transportation

EXECUTIVE SUMMARY

This study assesses the potential impacts to local and regional air quality expected to result from implementation of the State Route (SR)-55/Newport Boulevard Improvements Project.

Air pollutant emissions would occur from equipment operation during Project construction and from vehicle movements in the lanes during the operation phase. Emissions of criteria air pollutants (carbon monoxide [CO], oxides of nitrogen [NO_X], reactive organic gases [ROG], oxides of sulfur [SO_X], particulate matter of less than 10 microns in diameter [PM_{10}], and particulate matter of less than 2.5 microns in diameter [$PM_{2.5}$]) were estimated separately for each construction phase and for future operations. Mitigation measures are proposed to reduce emissions from construction equipment, other motor vehicle exhaust, and fugitive dust.

The South Coast Air Basin (SCAB) is classified as nonattainment for CO and PM_{10}. Screening analyses were performed to determine whether traffic along Newport Boulevard could result in significant increases to localized CO and PM_{10} concentrations. A qualitative PM_{10} hot spot analysis revealed that local PM_{10} hot spots are not expected. A quantitative screening CO hot spot analysis predicted that CO hot spots may occur. However, the CO concentrations because of the Build Alternative are lower than for the No-Build Alternative. Therefore, the SR-55/Newport Boulevard Improvements Project would not result in significant localized CO concentrations.

The Project build alternatives are consistent with the 2003 Draft Air Quality Management Plan (AQMP) for the SCAB and the 2002 Regional Transportation Improvement Plan (RTIP). The proposed Project is included in the 2002 RTIP; therefore, it conforms to requirements of the federal Clean Air Act Amendments (CAAAs) of 1990.

1. PROJECT DESCRIPTION AND ALTERNATIVES

1.1 Project Location and Setting

The proposed Project is located in the City of Costa Mesa in Orange County (Figure 1). Specifically, it is along State Route (SR)-55/Newport Boulevard in the City of Costa Mesa's Downtown Redevelopment Area and extends from approximately 140 meters (m) (460 feet [ft]) north of 19th Street to 17th Street with minor work south of 17th Street for restriping. The portion of SR-55 designated as a freeway ends at 19th Street, and then it continues as a divided highway to the south, past 17th Street. The highway segment within the Project limits includes five closely spaced signalized intersections, along with several at-grade T-intersections where local streets intersect either the northbound or the southbound lanes of the highway.

The majority of land uses within the urbanized Project area is zoned as commercial. Curbside on-street parking exists along northbound Newport Boulevard, and pedestrians cross SR-55/Newport Boulevard to access business and entertainment facilities located along the highway.

1.2 Project Description and Alternatives

The Project proposes to improve traffic and pedestrian conditions along SR-55/Newport Boulevard within the Project limits. Currently, traffic along the highway exceeds capacity and both the 19th Street and 17th Street intersections rank among the most highly congested in the county.

1.2.1 Alternatives

The two alternatives considered for Newport Boulevard are as follows:

No Build Alternative

Under this alternative, there would be no additional lanes or other improvements provided through the Project limits. This alternative would retain the roadway with its existing lane configuration of three through lanes in each direction with turn lanes. Traffic demand would continue to increase, and congestion through the Project limits would worsen.

Build Alternative – Addition of a fourth northbound lane from 17th Street to 19th Street and a fourth southbound lane through the 19th Street intersection

This alternative includes the addition of a fourth northbound lane through the entire Project limits and the addition of a fourth southbound lane through the 19th Street intersection only. Curb locations would not be changed along the northbound lanes between Old 17th Street and 19th Street, or along the southbound lanes between Harbor Boulevard and 19th Street. Existing curbside on-street parking along the northbound lanes would be retained from 17th Street to Flower Street. Sidewalk and curb improvements will be evaluated at the south end of the Project; spot sidewalk and curb reconstruction would be completed to repair damaged concrete where required. Driveway accesses and curb ramps would be constructed or reconstructed to meet the requirements of the Americans with Disabilities Act (ADA), where feasible. Bus stop locations will be reviewed for adherence to Orange County Transit Authority requirements. Landscaping and aesthetic improvements will be considered for the Project limits.

Minor right-of-way acquisitions may be required for this alternative to complete the above improvements. For this alternative, various combinations of lane widths and median widths will be studied.

2. AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION MEASURES

2.1 Affected Environment

2.1.1 Introduction

Air quality impacts were evaluated for this Project because the proposed SR-55/Newport Boulevard Improvements Project has the potential to generate substantial air emissions during both the construction and operation phases. The emissions associated with construction phase activities include operation of construction equipment, disturbance of soil, and consumption of energy to power construction equipment. The emissions associated with the Project operation phase would be from vehicular traffic.

2.1.2 Environmental Setting

SR-55/Newport Boulevard is located in the Los Angeles Basin, which is within the 6,600-square-mile South Coast Air Basin (SCAB). The SCAB encompasses all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. It consists of a coastal plain with interconnecting broad valleys and low hills. Elevations range from sea level to over 3,353 m (11,000 ft) above mean sea level (MSL). The South Coast Air Quality Management District (SCAQMD) has jurisdiction over air quality issues within the SCAB.

The Project site is located in the City of Costa Mesa, which is adjacent to the City of Santa Ana and is characterized by a business district and residential areas. While the SCAB has some of the most unhealthful air quality in the nation, air quality within the SCAB continues to show improvement. Also, because of Costa Mesa's proximity to the Pacific Ocean, air quality in Costa Mesa is generally better than more inland portions of the SCAB.

According to the California Division of Mines and Geology (CDMG), the project is not located in an area of naturally occurring asbestos (NOA). NOAs are identified based on the type of rock found in that area. Asbestos-containing rocks found in California include ultramathic rock and serpentinite, which are not present in the project area (CDMG, 2003).

2.1.3 Climate/Meteorology

Warm dry summers, low precipitation, and mild winters characterize the overall climate in the SCAB. The average daily winter temperature is 51 degrees Fahrenheit (°F) (10.6 degrees Celsius [°C]), and the average daily summer temperature is 75°F (23.9°C). During the year, temperatures range from a low near 20°F (-6.7°C) during the winter to a high of over 100°F (37.8°C) during the summer. More than two-thirds of the annual rainfall occurs from December through March, with approximately 90 percent occurring between November and April. The mean annual precipitation in the Costa Mesa/Santa Ana area over a 53-year period (1948-2001) was 330 millimeters (mm) (12.99 inches) – somewhat less than experienced by the Los Angeles Basin as a whole. The average monthly minimum temperature during the months of November through March is 46.7°F (8°C). The warmest months, July through September, experience an average maximum monthly temperature of 83.5°F (28.6°C). Winds in the Project area are usually driven by the dominant land/sea

breeze circulation system. Daytime onshore sea breezes dominate the regional wind patterns. At night, the winds generally slow down and reverse direction, traveling towards the sea. Local canyons alter the wind direction, with wind tending to flow parallel to the canyons. During the transition period from one wind pattern to the other, the dominant wind direction rotates into the south and causes a minor wind direction maximum from the south. The frequency of calm winds (less than 2 miles per hour [mph]) is less than 10 percent. Therefore, there is little stagnation in the Project vicinity, especially during busy daytime traffic hours. The SCAB experiences a persistent temperature inversion (increasing air temperature with increasing altitude) because of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid-afternoon to late afternoon on hot summer days, when the smog appears to suddenly clear up. Winter inversions frequently break by mid-morning.

The California Air Resources Board (CARB) maintains monitoring stations throughout the SCAB to monitor concentrations of criteria pollutants in the air. The nearest CARB monitoring station to the Project site that measures all criteria pollutants, except particulate matter of less than ten microns in diameter (PM_{10}), is the South Coastal Orange County Station (Station No. 060591003-1) in Costa Mesa. This station is located at 2850 Mesa Drive, approximately 5 kilometers (km) (3.1 miles) from the Project site. PM_{10} is measured at another South Coastal Orange County Station (Station No. 060590001-1) in Anaheim. This station is located at 1610 South Harbor Boulevard, approximately 20 km (12 miles) from the Project site. Table 1 provides monitored ambient air quality data from both stations for the last 3 years available (2000-2002).

Table 1
Air Pollutant Data Summary from South Coastal Orange County (Costa Mesa & Anaheim) Monitoring Stations (2000-2002)[4]

Pollutant	EPA Monitoring Station Data		
	2000	2001	2002
Ozone (O_3)			
Highest 1 hour, ppm	0.102	0.098	0.087
Days > 0.12 ppm[1]	0	0	0
Days > 0.09 ppm[2]	1	1	0
Highest 8-hour, ppm[3]	0.069	0.067	0.067
Days > 0.08 ppm[1]	0	0	0
Carbon Monoxide (CO)			
Highest 1 hour, ppm	7.8	6.2	4.8
Days > 35.0 ppm[1]	0	0	0
Days > 20.0 ppm[2]	0	0	0
Highest 8 hour, ppm	6.3	4.6	3.2
Days > 9.0 ppm[1,2]	0	0	0
Nitrogen Dioxide (NO_2)			
Highest 1 hour, ppm	0.107	0.082	0.106

Table 1
Air Pollutant Data Summary from South Coastal Orange County (Costa Mesa & Anaheim) Monitoring Stations (2000-2002)[4]

Pollutant	EPA Monitoring Station Data		
	2000	2001	2002
Days > 0.25 ppm[2]	0	0	0
Annual Average	0.02	0.017	0.015
Days > 0.053 ppm[1]	0	0	0
Sulfur Dioxide (SO_2)			
Highest 24 hour, ppm	0.005	0.005	0.007
Days > 0.14 ppm[1]	0	0	0
Days > 0.25 ppm[2]	0	0	0
Particulates (PM_{10})			
Highest 24 hour	126	93	64
Days > 150 µg/m^3 [1]	0	0	0
Days > 50 µg/m^3 [2]	8	9	5
Fine Particulate ($PM^{2.5}$)			
Highest 24 hour	113.9	70.8	68.6
Days > 65 µg/m^3 [1]	6	1	1
Annual Average	20.3	22.0	18.6
Days > 15 µg/m^3 [1]	n/a	n/a	n/a
Lead (Pb)	N/A	N/A	N/A

ppm - parts per million
µg/m^3 - micrograms per cubic meter
NM - Not measured at this station
AAM - Annual Arithmetic Mean
AGM - Annual Geometric Mean
[1]Federal Standard
[2]State Standard
[3]8-hour ozone based on 3-year average
[4]All pollutants are measured at the Costa Mesa Monitoring Station except for PM_{10}, which is measured at the Anaheim Station.

Source: EPA Air Data and CARB.

2.1.4 Air Quality Regulations

Federal Regulations/Standards

Pursuant to the federal Clean Air Act (CAA) of 1970, the United States Environmental Protection Agency (EPA) established National Ambient Air Quality Standards (NAAQS). The NAAQS were established for several major pollutants, termed "criteria" pollutants because the standards are supported by specific medical evidence. The NAAQS are two-tiered: primary standards to protect public health and secondary standards to prevent degradation to the environment (e.g., impairment of visibility, damage to vegetation and property).

The six criteria pollutants are ozone (O_3), carbon monoxide (CO), PM_{10} (includes diesel particulate matter), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead (Pb). Table 2 shows the primary standards for these pollutants, and Table 3 shows the health effects resultant from exposure to these pollutants.

On July 18, 1997, the USEPA issued new final rules regarding NAAQS for ozone and particulate matter. The change lowered the federal 24-hour PM_{10} standard, added a 24-hour and annual $PM_{2.5}$ standard, and changed the 1-hour ozone standard to an 8-hour standard. The PM_{10} standard was promulgated and is the current standard in effect today. The $PM_{2.5}$ and ozone standards were challenged and their enforcement was blocked by a court decision. On May 14, 1999 the US Court of Appeals remanded the authority to set new NAAQS back to the USEPA, but concluded that the new 8-hour ozone standard "cannot be enforced." On February 27, 2001 the US Supreme Court overturned the ruling and reinstated the 8-hour ozone standard. However, the court found that the EPA's implementation policy was unlawful and that the EPA needed to develop a reasonable implementation. Recently an agreement was reached between the USEPA, local air agencies, and industry representatives on how to implement the new 8-hour ozone standard. A new implementation plan was developed and published in the Federal Register. With that, the new 8-hour ozone standard went into affect.

New attainment designations for ozone and $PM_{2.5}$ will be made in 2004, after which local state authorities must develop their own enforceable implementation plans by 2006. Based on current available data, it appears that the project area would be designated as non-attainment for the both the 24-hour and annual $PM_{2.5}$ standards. Ozone concentrations in the area have been steadily decreasing over the years. However, the 1-hour concentrations have been above state standards which are more stringent than the federal standard. It is expected that once federal designations have been made, CARB will issue a state 8-hour ozone standard. In 2001 and 2002, the 8-hour ozone levels in the project area have been below the federal standard. If this trend continues, it is expected that the project area will be designated as attainment for the federal 8-hour ozone standard. Until CARB issues their 8-hour ozone standard, final designation for the area cannot be determined.

Table 2
Ambient Air Quality Standards

Pollutant	Average Time	State Concentration	Federal Primary	Federal Secondary
Ozone	1 Hour 8-Hour	0.09 ppm (180 µg/m3)	0.12 ppm (235 µg/m³) 0.08 ppm (155 µg/m³)	Same as Primary Standard Same as Primary standard
Nitrogen Dioxide	Annual Average 1 Hour	– 0.25 ppm (470 µg/m³)	0.053 ppm (100 µg/m³) –	Same as Primary Standard
Carbon Monoxide	8 Hour 1 Hour	9 ppm (10 mg/m³) 20 ppm (23 mg/m³)	9 ppm (10 mg/m³) 35 ppm (40 mg/m³)	

Table 2
Ambient Air Quality Standards

Pollutant	Average Time	State Concentration	Federal Primary	Federal Secondary
PM_{10}	Annual Geometric Mean	30 μg/m³	–	
	Annual Arithmetic Mean	–	50 μg/m³	Same as Primary
	24 Hour	50 μg/m³	150 μg/m³	Standard
$PM_{2.5}$	24 Hour		65 μg/m³	Same as Primary standard
	Annual Average		15 μg/m³	Same as Primary standard
Sulfur Dioxide	Annual Average	–	80 μg/m³ (0.03 ppm)	–
	24 Hour	0.04 ppm (105 μg/m³)	365 μg/m³ (0.14 ppm)	–
	3 Hour	–	–	1300 μg/m³ (0.5 ppm)
	1 Hour	0.25 ppm (655 μg/m³)	–	–
Lead	30-Day Average	1.5 μg/m³	–	–
	Calendar Quarter	–	1.5 μg/m³	Same as Primary Standard
Sulfates	24 Hour	24 μg/m³	–	–
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m³)	–	–
Vinyl Chloride (chloroethene)	24 Hour	0.010 ppm (26 μg/m³)	–	–
Visibility-Reducing Particles	8 Hour (10:00 am to 6:00 pm, PST)	**	–	–

** Insufficient amount to produce an extinction coefficient of 0.23 per km due to particles when the relative humidity is less than 70 percent. Measurement in accordance with CARB Method V.

Source: CARB, 2002.

Table 3
Health Effects Summary for Air Pollutants

Pollutants	Sources	Primary Effects
Ozone	Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	Aggravation of respiratory and cardiovascular diseases; irritation of eyes; impairment of cardiopulmonary function; plant leaf injury.
Nitrogen Dioxide	Motor vehicle exhaust; high temperature; stationary combustion; atmospheric reactions.	Aggravation of respiratory illness; reduced visibility; reduced plant growth; formation of acid rain.

Table 3
Health Effects Summary for Air Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide	Incomplete combustion of fuels and other carbon-containing substances such as motor vehicle exhaust, and natural events such as decomposition of organic matter.	Reduced tolerance for exercise; impairment of mental function; impairment of fetal development; death at high levels of exposure; aggravation of some heart disease (angina).
PM_{10} $PM_{2.5}$	Stationary combustion of solid fuels; construction activities; industrial processes; atmospheric chemical reactions.	Reduced lung function; aggravation of the effects of gaseous pollutants; aggravation of respiratory and cardiorespiratory diseases; increased cough and chest discomfort; soiling; reduced visibility.
Sulfur Dioxide	Combustion of sulfur-containing fossil fuels; smelting of sulfur-bearing metal ores; industrial processes.	Aggravation of respiratory diseases (asthma, emphysema); reduced lung function; irritation of eyes; reduced visibility; plant injury. Deterioration of metals, textiles, leather, finishes, coating, etc.
Lead	Contaminated soil.	Impairment of blood function and nerve construction; behavioral and hearing problems in children.

Source: CARB, 2002.

Data collected at permanent monitoring stations are used by EPA to classify regions as "attainment" if the primary NAAQS have been achieved, or "nonattainment" if the NAAQS are not achieved. The SCAB is currently classified as a nonattainment area for three criteria pollutants: O_3, PM_{10}, and CO. The remaining three criteria pollutants are classified as attainment.

The CAA originally set a 5-year deadline for NAAQS attainment; however, the attainment date was subsequently revised by the Clean Air Act Amendments (CAAAs), which also required the states to identify nonattainment subareas within their borders and to develop an EPA-approved State Implementation Plan (SIP) demonstrating attainment of all NAAQS by 1982. In a later EPA mandate, that attainment deadline was extended to 1987. The 1990 CAAAs specify new strategies for attaining NAAQS nationwide over the next 20 years, including mandatory 3 percent annual reductions of air pollutant emissions for both existing and new stationary sources, the scheduled introduction of low-emission cars and trucks into the nation's motor vehicle fleet, and the development of mass transit or higher occupancy vehicle alternatives to the single-passenger automobile. The 1990 CAAAs designated the SCAB as follows: "extreme" for O_3, requiring attainment with the federal O_3 standard by 2010; "serious" for CO, requiring attainment of federal CO standards by 2000; and "serious" for PM_{10}, requiring attainment with federal standards by 2006. The SCAB still has not reached CO attainment.

In response to CAA requirements, SCAQMD and the Southern California Association of Governments (SCAG), which has been designated by EPA as the Metropolitan Planning Organization (MPO) responsible for ensuring compliance with the requirements of the CAA, prepared a draft 2003 Air Quality Management Plan (AQMP) for attainment of ambient air quality standards (AAQS).

State Regulations/Standards

The State of California began to set California ambient air quality standards (CAAQS) in 1969 under the mandate of the Mulford-Carrell Act. The CAAQS are generally more stringent than the NAAQS. In addition to the six criteria pollutants covered by the NAAQS, there are CAAQS standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Table 2 also lists these standards.

Originally, there were no attainment deadlines for the CAAQS. However, the California Clean Air Act (CCAA) of 1988 provided a time frame and a planning structure to promote attainment. The CCAA required nonattainment areas in the State to prepare attainment plans, and it proposed to classify each such area on the basis of the submitted plan, as follows: moderate, if CAAQS attainment could not occur before December 31, 1994; serious, if CAAQS attainment could not occur before December 31, 1997; and severe, if CAAQS attainment could not be conclusively demonstrated at all. The attainment plans are required to achieve a minimum 5 percent annual reduction in the emissions of nonattainment pollutants, unless all feasible measures have been implemented. According to the CAAQS, the SCAB is classified as a "severe" nonattainment area for O_3, CO, and PM_{10}.

2.1.5 Regional Air Quality Planning

CARB coordinates and oversees both state and federal air pollution control programs in California. CARB has divided the state into 15 air basins. Significantly, authority for air quality control within them has been given to local Air Pollution Control Districts (APCD) or Air Quality Management Districts (AQMD), which regulate stationary source emissions and develop local nonattainment plans. CARB has designated all of Los Angeles County south of the San Gabriel Mountains, Orange County, and the non-desert portions of Riverside and San Bernardino Counties as the Basin under the jurisdiction of SCAQMD. SCAQMD is responsible for regulating stationary source emissions, and it has the authority to regulate mobile emissions as an indirect source. SCAQMD and SCAG jointly conduct air quality planning in the Basin. CARB regulates motor vehicles and fuels.

Regional Air Quality Management Plan

Compliance with the provisions of the federal CAA and CCAA is the primary focus of the latest AQMP developed by SCAQMD and SCAG. The Plan is revised every 3 years, with the latest version adopted by SCAQMD being the 1997 AQMP, as modified by the 1999 amendments. CARB adopted the latest AQMP in February 1997, and it was included in the SIP and sent to EPA for its review and approval.

According to the 1997 AQMP, attainment for all federal health standards is to occur no later than 2000 for CO, 2006 for PM_{10}, and 2010 for O_3. State standards would be attained no later than 2000 for CO. State standards for O_3 and PM_{10} would not be achieved until after 2010.

SCAQMD has prepared a 2003 draft to revise its AQMP. This revision would set the date for CO attainment to 2004. PM_{10} attainment of the NAAQS would be 2006 and attainment of the CAAQS to beyond 2010. O_3 NAAQS attainment would be scheduled for 2010 and attainment of the CAAQS to beyond 2010.

2.2 Consistency with Applicable Regional Plans

The SR-55/Newport Boulevard Improvements Project is included in the 2002 Regional Transportation Improvement Plan (RTIP).

The 2002 RTIP programs total $24.7 billion for implementing the transportation projects within the next 6 fiscal years (2002/03-2007/08). All projects incorporated into the 2002 RTIP are consistent with the current Regional Transportation Program (RTP) policies, programs, and projects.

The 2002 RTIP was developed in compliance with state and federal requirements. County Transportation Commissions have the responsibility under State law of proposing county projects, using policies, programs, and projects of the current RTP as a guide, from among submittals by cities and local agencies. The locally prioritized lists of projects were forwarded to SCAG for review. From this list, SCAG developed the 2002 RTIP based on consistency with the current RTP, inter-county connectivity, financial constraint, and conformity satisfaction.

In the SCAG region, a biennial RTIP update is produced on an even-year cycle. The current operating 2001 RTIP was prepared because, under federal law, within 6 months of federal approval of a new RTP (i.e., the 2001 RTP), a new federally approved and conforming RTIP must be in place, otherwise the operating RTIP will expire. The current operating 2001 RTIP was approved by the federal agencies (including its final conformity determination) on September 25, 2001. An amendment to the 2001 RTP and 2001 RTIP was federally approved on May 10, 2002. The United States Department of Transportation (USDOT) approved the 2002 RTIP on October 4, 2002.

2.3 Conformity Determination

The CAAAs of 1990 require that transportation plans, programs, and projects that are funded by or approved under Title 23 United States Code (U.S.C.) or the Federal Transit Act, conform to state or federal air quality plans. To be in conformance, a project must come from approved transportation plans and programs such as the SIP, RTP, and RTIP. SCAG, as the federally recognized MPO and the designated regional transportation planning agency, is responsible for preparing the RTP and RTIP. As part of its regional planning responsibilities, SCAG prepares the demographic projections and integrated land use, housing, employment, and transportation programs, measures, and strategies portions of the AQMP. These projections are used for determining conformity to the AQMP for proposed federal projects, plans, and programs.

The proposed Project is identified in the "Orange County State Highway" project listing of the federally approved 2002 RTIP as "ORA000161" (Appendix B). The 2002 RTIP received USDOT approval on October 4, 2002. Given that the SR-55/Newport Boulevard Improvements Project is consistent with the 2001 RTP and included in the 2002 RTIP, the Project conforms to the requirements of the federal CAAAs of 1990 and will not interfere with the timely implementation of all Transportation Control Measures (TCMs) identified in the currently approved SIP.

2.4 Potential Air Quality Impacts

Air quality impacts are usually divided into short term and long term. Short-term impacts are usually the result of construction or grading operations. Long-term impacts are associated with the built-out condition of the proposed Project.

2.4.1 Thresholds of Significance

Project-related air contaminant emissions would have a significant effect if they result in concentrations that create either a violation of an AAQS or contribute to an existing air quality violation. Should ambient air quality already exceed existing standards, SCAQMD has established specific significance threshold criteria for emissions to account for the continued degradation of local air quality. Table 4 outlines the threshold criteria recommended for use in evaluating the effects on existing local air quality violations.

SCAQMD does not require that air dispersion modeling be conducted for PM_{10} to assess the significance of a project's impact to air quality during construction.

Table 4
Significance Criteria – Allowable Regional Emission Limits

Air Pollutant	Construction Phase		Operational Phase
	(lbs/day)	(tons/quarter)	(lbs/day)
Reactive Organic Gases (ROG)	75	2.50	55
Carbon Monoxide (CO)	550	24.75	550
Nitrogen Oxides (NO_x)	100	2.50	55
Oxides of Sulfur (SO_x)	N/A	6.75	150
Particulates (PM_{10})	150	6.75	150
Fine Particulates ($PM_{2.5}$)[1]	N/A	N/A	N/A

Source: SCAQMD, California Environmental Quality Act (CEQA) Air Quality Handbook, 1993.

1 $PM_{2.5}$ has not been added to the CEQA handbook at this time.

2.4.2 Short-Term Impacts

Temporary air quality impacts would result from Project construction activities. Air pollutants would be emitted by construction equipment, and fugitive dust would be generated during construction activities such as pavement grinding and paving operations.

Emissions from construction activities are estimated using emission factors established by EPA (according to the *1993 CEQA Handbook*, estimated emission factor for disturbed soil is 26.4 pounds of PM_{10} per day per acre). If water or other soil stabilizers are used to control dust required by SCAQMD Rule 403, the emissions can be reduced by 50 percent. The PM_{10} calculations include the 50 percent reduction from watering.

The construction phase is expected to last for approximately 3 months. The construction schedule is based on one 8-hour shift per day, 5 days per week, and is expected to occur during the night-time hours. Construction will comprise of the following six stages:

1. Removal of medians, sidewalks, and curbs
2. Construction of new medians, sidewalks, and curbs
3. Grinding and removal of pavement
4. Construction of new pavement
5. Restriping of new pavement
6. Landscaping and other aesthetic work

Criteria pollutant emissions were calculated for these activities and are summarized in Table 5. Fugitive dust emissions would also be generated during Stages 3 and 4 of construction. These emissions are also included in Table 5. Since there is no significance criteria for $PM_{2.5}$, $PM_{2.5}$ emissions are not included in this analysis. No structures would be demolished as a result of the Project; therefore, there is no risk of structural asbestos being released into the air.

Table 5
Summary of Construction Phase Emissions

Stage	Time (weeks)	Emissions (lbs/day)				
		CO	ROG	NO_X	SO_X	PM_{10}[1]
Mobilization [2]	2	5.26	0.84	0.45	0.00	0.22
1	1	16.99	2.30	12.28	0.21	0.92
2	2	5.83	0.99	3.22	0.00	0.40
3	1	18.91	16.69	13.17	0.23	26.97
4	1	10.34	2.28	13.02	0.23	26.96
5	1	5.55	0.92	1.84	0.00	0.31
6	4	5.83	0.99	3.22	0.00	0.40
Threshold		**550**	**75**	**100**	**150**	**150**

[1]PM_{10} emissions include fugitive dust emissions.
[2]Mobilization occurs prior to construction.

The stages of construction will be performed sequentially. The maximum daily emissions will occur during Stage 3. There are no standards for determination of conformity for construction emissions; therefore, the daily emissions thresholds set forth in SCAQMD's *1993 CEQA Air Quality Handbook* were used as a guideline. Based on the calculation results, no significant daily emissions would occur during any phase of construction. However, to further reduce project emissions, mitigation measures will be implemented during construction activities. These measures are presented in Section 2.5.

2.4.3 Long-Term Impacts

Regional Air Quality

The primary source of regional emissions generated by the proposed Project will be from motor vehicles.

Emission rates for vehicles and various types of trucks were estimated using EMFAC2002. EMFAC2002 is a computer program generated by CARB that calculates emission rates for

vehicles. The emission factors were calculated based on an assumption that an average speed of 25 mph for the future No-Build Alternative would occur, and 30 mph for the future Build Alternative would be achieved. It is noteworthy that the results of emission calculations are expected to be similar between the future No-Build and Build Alternative, since the total traffic volume is not expected to change and the average vehicle travel speeds are similar. Therefore, CEQA requirements regarding a regional analysis are satisfied.

The Project is included as part of the 2002 RTIP. The 2002 RTIP has been federally approved to conform with the 2001 RTP and the State's Transportation Improvement Program (TIP). Estimated emissions from the Project were included as part of the 2002 RTIP. The proposed improvements to Newport Boulevard are not significantly different from the proposed improvements included in the regional analysis of the RTIP. Therefore, an additional regional analysis is not required for this Project.

Local Air Quality

CO and PM_{10} are the pollutants of major concern along roadways. For this reason, CO and PM_{10} concentrations are usually indicative of the local air quality generated by a roadway network, and they are used as an indicator of its impacts on local air quality. A CO hot spot screening analysis was performed following the California Department of Transportation (Caltrans) document *Transportation Project-Level Carbon Monoxide Protocol* (Caltrans, 1998). A qualitative PM_{10} hot spot analysis was performed following *Caltrans Interim Guidance: Project-Level PM_{10} Hot Spot Analysis* (Caltrans, 2000) and the Federal Highway Administration's (FHWA) *Guidance for Qualitative Project-Level Hot Spot Analysis in PM_{10} Non-Attainment and Maintenance Areas* (FHWA, 2001).

CO Hot Spot Screening Analysis

A CO hot spot analysis was performed for the Project comparing the CO concentrations resulting from the Build versus the No-Build Alternatives. The three steps performed included:

1. Determining if local impacts need to be examined. This was done by following the flowchart shown in Figure 1 of the Caltrans protocol (Caltrans, 1998). According to the protocol, the Project will be required to examine local impacts.

2. Determining the level of analysis required for the Project. This was done by following the flowchart shown in Figure 3 of the protocol (Caltrans, 1998). According to the protocol, this Project would require a Level 4 analysis, which involves a screening analysis considering the project location, nearby receptors, traffic volumes, level of service (LOS), and air quality conditions for current and future years.

3. Conducting a Level 4 analysis, which involved a quantitative screening analysis based on Appendix A of the protocol. Details of this analysis are provided below.

Table 6 shows peak current and future traffic volumes that were developed based on the traffic study performed for this Project.

Table 6
Predicted Year 2025 Traffic Volumes

Movement	AM Peak			PM Peak		
	Vehicles per hour[1]	Vehicles per Hour per Lane[2]		Vehicles per hour[1]	Vehicles per Hour per Lane[2]	
		Build	No-Build		Build	No-Build
Newport Boulevard @ 19th Street						
Southbound	3,280	547	656	4,229	705	846
Westbound	401	80	80	407	81	81
Northbound	3,929	655	786	3,364	561	673
Eastbound	1,083	217	217	1,418	284	284
Newport Boulevard @ 17th Street						
Southbound	3,330	666	666	3,739	748	748
Westbound	1,082	180	180	852	142	145
Northbound	2,534	422	507	2,440	407	488
Eastbound	1,114	223	223	1,324	265	265

[1]The future Build and No-Build Alternatives are expected to result in the same traffic volumes.
[2]Build options add a northbound and southbound lane at 19th Street and a northbound lane at 17th Street.

Table 7 shows information used as part of the analysis.

Table 7
Parameters Used in Quantitative Screening Analysis

Parameter	Value
Project Location	Coastal Area
Average cruise speed (mph) No-Build Build	 25 [1] 30 [1]
% Red Time Both Alternatives	 50% [1]
Percentage of Cold Starts Both Alternatives	 15% [1]
Analysis Year	2012 [2]
Worst-case Wind Speed	1.0 m/s [1,3]
8-Hr Persistence Factor	0.7
Receptor Distance No-Build Build	 3 m 3 m

[1] Value used was assumed based on Project design.
[2] 2012 is the latest year the protocol predicts concentrations. Concentrations for year 2025 are expected to be lower than predicted by the protocol.
[3] Average wind speed in the area is greater than 1.0 m/s.

The purpose of the screening procedure is to obtain conservative estimates of CO concentrations without having to run the computational models, i.e. EMFAC and CALINE4, as required for a detailed analysis. This screening procedure is not applicable to all projects. Projects that meet any of the following scenarios should not perform a screening analysis:

Vehicles in cold start mode > 50%
Percentage of Heavy Duty Gas Trucks > 1.2%
Traffic volumes > 1000 vphpl
January mean minimum temperature < 35°F

This project does not meet the above scenarios; therefore the screening procedure was determined to be appropriate. Since a detailed analysis is not warranted due to the use of the screening procedure, specific modeling programs such as EMFAC (or its newer version EMFAC2002) are not required.

Qualitative PM_{10} Hot Spot Analysis

The PM_{10} hot spot analysis was performed following the qualitative analysis protocols of Caltrans and providing information as suggested in the FHWA guidance. The Caltrans protocol was designed to aid projects in PM_{10} non-attainment and maintenance areas. This analysis involves six steps to determine if PM_{10} emissions from the Project would result in potential significant impacts. The six-step determination is discussed below

1. All of California has been designated a nonattainment area for PM_{10}. Therefore, PM_{10} hot spots could occur throughout California.

2. Local monitored data taken at CARB's Anaheim Station (see Table 1) show that the local PM_{10} concentrations for the past 3 years have exceeded the CAAQS, but not the NAAQS. Therefore, local PM_{10} hot spots could occur.

3. There are no unusual circumstances existing in the Project vicinity that would result in local PM_{10} concentration increases. The area surrounding the Project is well developed with little exposed open space. The area is also highly residential and commercial and high concentrations of diesel trucks are not expected. Smaller gasoline vehicles, not diesel trucks, would normally service the commercial locations.

4. Although there are no unusual circumstances that may cause an increase in local PM_{10} concentrations, the Project will implement all mitigation measures as required by the SIP.

5. The SIP includes control measures affecting transportation projects. The SIP conforms to all applicable regulations. Therefore, the Project, by following control measures included in the SIP, will also conform to all applicable regulations.

6. Since the Project is included in the 2002 RTIP and all conformity requirements have been met, consultation with other agencies is not expected to be required.

According to FHWA guidance, qualitative methods can be categorized into the following approaches:

1. Comparison to another location with similar characteristics

2. Findings from air quality studies

The analysis for this project would fall under approach 2. As previously stated, this project is included in the 2002 RTIP. An air quality study was performed as part of the RTIP, and found to be in compliance with state and federal requirements.

The FHWA guidance also suggests that the following information also be included in the analysis:

1. Project Description
2. Influence Factors
3. Statement of Existing Air Quality
4. Mitigation Practices

The project description is provided in Section 1.2. There are two influencing factors regarding PM_{10} emissions from this project. Construction activities will result in the generation of PM_{10} emissions from equipment exhaust and from fugitive dust. However, construction activities are temporary and are not expected to result in long term air quality impacts. The other factor is that this project involves the modification of the street to relieve congestion from local traffic. Although this improvement will add additional capacity, the main effect will be the reduction in idling times of vehicles traveling along this route. Since more PM_{10} emissions are generated by vehicle engines during idling, this reduction in idling times would result in an overall air quality benefit. The existing air quality in the area is presented in Sections 2.1.2 and 2.1.3. Lastly, mitigation practices are presented in Section 2.5.

2.4.4 Analysis Results

Short-Term Impacts

Emissions generated during the construction phase of the Project are expected to result in insignificant emissions of criteria pollutants, including fugitive PM_{10}. Due to the short term of the construction phase, all impacts will be temporary. Various control measures will be implemented to reduce PM_{10} emissions during construction.

Long-Term Impacts

The CO screening analysis predicted that the Build and No-Build CO concentrations at Newport Boulevard and 17th Street would be similar during both peak AM and PM hours. The Build Alternative at Newport Boulevard and 19th Street would result in lower CO concentrations for both the peak AM and PM hours. Combining the predicted 1-hour CO concentrations with the monitored CO concentrations predicts the final expected local CO concentrations because of the Project. The results presented in Table 8 show that neither the No-Build nor the Build options would result in localized 1-hour CO hot spots (exceedances of federal or state AAQS). Combining the predicted 8-hour CO concentration with the highest monitored CO concentration, shown in Table 9, results in exceedances of the 8-hour federal and state AAQS.

Table 8
Total Predicted Local 1-Hour CO Concentrations

	AAQS (ppm)		No Build 1-Hour CO Concentration (ppm)			Build 1-Hour CO Concentration (ppm)		
	Federal	State	Predicted	Background	Total	Predicted	Background	Total
Newport Boulevard @ 19th street								
AM Peak	35	20	7.0	5.8	12.8	4.7	5.8	10.5
PM Peak			7.9	5.8	13.7	7.6	5.8	13.4
Newport Boulevard @ 17th Street								
AM Peak	35	20	4.2	5.8	10.0	4.2	5.8	10.0
PM Peak			6.9	5.8	12.7	6.9	5.8	12.7

Note: Background concentrations are predicted CO concentrations for year 2020 as shown in the SCAQMD draft 2003 AQMP.

Table 9
Total Predicted Local 8-Hour CO Concentrations

	AAQS (ppm)		No Build 8-Hour CO Concentration (ppm)			Build 8-Hour CO Concentration (ppm)		
	Federal	State	Predicted	Background	Total	Predicted	Background	Total
Newport Boulevard @ 19th street								
AM Peak	9	9	4.9	4.7	9.6	3.3	4.7	8.0
PM Peak			5.6	4.7	10.3	5.3	4.7	10.0
Newport Boulevard @ 17th Street								
AM Peak	9	9	3.0	4.7	7.7	3.0	4.7	7.7
PM Peak			4.8	4.7	9.5	4.8	4.7	9.5

Note: Background concentrations are predicted CO concentrations for year 2020 as shown in the SCAQMD draft 2003 AQMP.

Although the results show that the 8-hour AAQS would still be exceeded in the Build Alternative, the concentrations are lower than for the No-Build Alternative. Therefore, the Build Alternative would aid in achieving CO attainment.

The qualitative PM_{10} hot spot analysis did not identify any issues that would result in an increase in the local PM_{10} concentrations. Therefore, PM_{10} emissions from the Project are not expected to result in PM_{10} concentrations beyond those expected in accordance with the 2002 RTIP, 2001 RTP, and SCAB SIP and AQMP.

Recently, concerns have been raised by the public regarding cancer risk associated with diesel exhaust emissions. Diesel exhaust is a complex mixture of gases and fine particles emitted by diesel-fired internal combustion engines. The gaseous fraction of diesel exhaust is composed of typical combustion gases such as nitrogen, oxygen, carbon dioxide, and water

vapor. However, as a result of incomplete combustion, the gaseous fraction also contains air pollutants such as carbon monoxide, sulfur oxides, nitrogen oxides, volatile organics, alkenes, aromatic hydrocarbons, and aldehydes such as formaldehyde, 1,3-butadiene and low-molecular weight polycyclic aromatic hydrocarbons (PAH) and PAH-derivatives. Based on the review of the cancer potencies of various TACs emitted from the combustion of diesel fuel, it is concluded that the cancer potential of the particulate matter fraction of diesel exhaust would constitute the maximum health risk.

Less than 5 percent of the vehicles traveling along this project area are diesel trucks. Although the project would not reduce the number of vehicles, it would reduce the idling time of these vehicles. Since diesel exhaust emissions would be highest when a vehicle is idling, this project would result in lower diesel exhaust emissions. This in turn would result in lower toxic risks in the area. It is expected that the traffic volumes in the area would increase 20 percent by the year 2025. Without the proposed project, the emissions and the toxic risk from vehicles in the area would only rise. This project will result in a lowering of the potential toxic risks in the area.

2.5 Mitigation Measures

2.5.1 Short-Term Construction Impact Mitigation

PM_{10} Control

Apply measures contained in Tables 1 and 2 of SCAQMD Rule 403. Control of particulate emissions from construction activities is best controlled through the requirements contained in SCAQMD's Rule 403. The information is reproduced here as Tables 10 and 11. The measures contained in these tables are presented as an option to air quality monitoring in Rule 403. Table 11 contains measures such as maintaining adequate moisture content in the soil, watering grading areas, establishing ground cover in inactive areas, and watering unpaved roads. Table 10 identifies additional measures that are applied during normal wind conditions. The mitigation measure, therefore, is to require utilization of the measures contained in Tables 1 and 2 of Rule 403. This potentially results in a much higher reduction of particulate emissions than if the air monitoring option contained in Rule 403 was employed. The construction contractors, would be required to obtain construction permits from the City of Costa Mesa and Caltrans. The City of Costa Mesa would be responsible for overseeing compliance with Rule 403 by the contractor.

Construction Equipment Emission Control

While the above PM_{10} control measures address particulate emissions from construction activities, other pollutants generated by construction equipment will also contribute to PM_{10} emission thresholds. The generation of these emissions would be almost entirely due to engine combustion in construction equipment and employee commuting. The measure below addresses these emissions.

Reduce construction equipment emissions by implementing the following measures. The following measures should be implemented when feasible. They should be included in improvement plans specifications for implementation by contractors.

- Use low-emission mobile construction equipment.

- Maintain construction equipment engines by keeping them tuned.
- Use low-sulfur fuel for stationary construction equipment. This is required by SCAQMD Rules 431.1 and 431.2.
- Utilize existing power sources (i.e., power poles) when feasible. This measure would minimize the use of higher-polluting gas or diesel generators.
- Configure construction parking to minimize traffic interference.
- Minimize obstruction of through-traffic lanes. When feasible, construction should be planned so that lane closures on existing streets are kept to a minimum.
- Schedule construction operations affecting traffic for off-peak hours.
- Develop a traffic plan to minimize traffic flow interference from construction activities (the plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service).
- Develop a "Diesel Fuel Reduction Plan" that identifies the actions to be taken to reduce diesel fuel emissions during construction activities (inclusive of grading and excavation activities). Reductions in diesel fuel can be achieved by measures including, but not limited to the following: a) use of alternative energy sources, such as compressed natural gas or liquefied petroleum gas, in mobile equipment and vehicles; b) use of "retrofit technology," including diesel particulate trips, on existing diesel engines and vehicles; c) other appropriate measures. Prior to the issuance of a grading permit, the Diesel Fuel Reduction Plan shall be filed with the City of Costa Mesa Planning Division.

Table 10
SCAQMD Rule 403 – Control Measures for Normal Wind Conditions

Source	Control Measure
Earthmoving (construction and filling area)	Maintain soil moisture content at a minimum of 12 percent, or earthmoving that is more than 100 feet from all property, watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earthmoving (construction fill areas)	Maintain soil moisture content at a minimum of 12 percent. For areas that have optimum moisture content for compaction of less than 12 percent, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content.
Earthmoving (construction cut areas)	Conduct watering as necessary to prevent visible emissions extending more than 100 feet beyond the active cut area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed Surface Areas (except completed stabilized grading areas)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas that cannot be stabilized, as evidenced by wind-driven fugitive dust, must have an application of water at least twice per day to at least 80 percent of the unstabilized area.

Table 10
SCAQMD Rule 403 – Control Measures for Normal Wind Conditions

Source	Control Measure
Disturbed Surface Areas	Apply chemical stabilizers within 5 working days of grading completion; or apply water to at least 80 percent of all inactive surface areas on a daily basis when there is evidence of wind-driven fugitive dust, except any areas that are inaccessible to watering vehicles due to excessive slope or other safety conditions; or establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter.
Inactive Disturbed Surface Areas	Apply water to at least 80 percent of all inactive disturbed areas on a daily basis when there is evidence of wind-driven fugitive dust, except any areas that are inaccessible to watering vehicles due to excessive slope or other safety conditions; or apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; or establish a vegetative ground cover within 21 days after active operations have ceased (ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter); or utilize any combination of the above three measures such that, in total, these actions apply to all inactive disturbed surface areas.
Unpaved Roads	Water all roads used for any vehicular traffic at least once per every 2 hours of active operations; or water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 mph; or apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open Storage Piles	Apply chemical stabilizers; or apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind-driven fugitive dust; or install temporary coverings; or install a three-sided enclosure with walls with no more than 50 percent porosity that extend, at a minimum, to the top of the pile.

Table 11
SCAQMD Rule 403 – Dust Control Actions for Exemption from Paragraph (d)(4)

Fugitive Dust Source Category		Control Action
Earthmoving (except construction cutting and filling areas, and mining operations)	(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by American Society for Testing and Materials (ASTM) method D-2216, or other equivalent method approved by the Executive Officer, CARB, and EPA. Two soil moisture evaluations must be conducted during the first 3 hours of active operations during a calendar day, and two such evaluations each subsequent 4-hour period of active operations; OR
	(1a-1)	For any earthmoving that is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.

Table 11
SCAQMD Rule 403 – Dust Control Actions for Exemption from Paragraph (d)(4)

Fugitive Dust Source Category		Control Action
Earthmoving (construction fill areas)	(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, CARB, and EPA. For areas that have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer, CARB, and EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first 3 hours of active operations during a calendar day, and two such evaluations during each subsequent 4-hour period of active operations.
Earthmoving (construction cut areas and mining operations)	(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas that cannot be stabilized, as evidenced by wind-driven fugitive dust, must have an application of water at least twice per day to at least 80 [70] percent of the unstabilized area.
Disturbed surface areas (completed grading areas)	(2c)	Apply chemical stabilizers within 5 working days of grading completion; OR
	(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a)	Apply water to at least 80 [70] percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind-driven fugitive dust, excluding any areas that are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR
	(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
	(3c)	Establish a vegetative ground cover within 21 [30] days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR
	(3d)	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.
Unpaved Roads	(4a)	Water all roads used for any vehicular traffic at least once per every 2 hours of active operations [3 times per normal 8-hour work day]; OR
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 mph; OR
	(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a)	Apply chemical stabilizers; OR
	(5b)	Apply water to at least 80 [70] percent of the surface area of all open storage piles on a daily basis when there is evidence of wind-driven fugitive dust; OR

Table 11
SCAQMD Rule 403 – Dust Control Actions for Exemption from Paragraph (d)(4)

Fugitive Dust Source Category		Control Action
	(5c)	Install temporary coverings; OR
	(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity extending, at a minimum, to the top of the pile.
All Categories	(6a)	Any other control measures approved by the Executive Officer and EPA as equivalent to the methods specified in Table 2 may be used.

* Measures in [brackets] are reasonably available control measures and only apply to sources not within the SCAB.

2.5.2 Long-Term Impacts

Regional Emissions

The Project conforms with the State's 2001 RTP; therefore, the Project is not expected to result in a significant regional air quality impact. No mitigation is required.

Local Air Quality Impacts

Operational CO and PM_{10} concentrations are found to be insignificant; therefore, the Project is not expected to result in long-term local air quality impacts.

2.6 Mitigation Monitoring Program

Table 12 shows the proposed mitigation monitoring program. The proposed mitigation measures would reduce both Project-related and cumulative air quality impacts.

Table 12
Mitigation Monitoring Program

Potentially Adverse Impacts	Mitigation Measures	Significance after Mitigation	Mitigation Responsibility	Frequency
AQ-1: Project construction would cause emissions of CO, oxides of nitrogen (NO_X), PM_{10}, and reactive organic gases (ROG).	All equipment shall be properly tuned and maintained in accordance with manufacturer's specifications. Construction contractors shall maintain and operate construction equipment to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues must be kept with their engines off when not in use to reduce vehicle emissions. Construction emissions shall be phased and scheduled to avoid emissions peaks, where feasible, and discontinued during second-stage smog alerts. Construction contractor shall prepare and implement a "Diesel Fuel Reduction Plan."	Less than significant	City of Costa Mesa	During construction

3. REFERENCES

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4. LIST OF PREPARERS AND CONTRIBUTORS

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Appendix A
Detailed Emission Calculations

Table 1
Construction Motor Vehicle Emission Factors[a]

Vehicle Type	Vehicle Class	Vehicle Weight (tons)	Road Type	Silt loading (g/m^2)[c]	Speed (mph)	CO	
						Exhaust g/mi	Start-Up[d] g/trip
Onsite Pickup Truck	Light duty truck, catalyst, gasoline	3	Local	0.24	5	22.65	31.36
Onsite Dump Truck	Heavy heavy-duty truck, diesel	40	N/A	N/A	5	15.21	0.00
Offsite Construction Commuter	Light duty truck, catalyst, gasoline	3	Collector	0.037	35	10.37	31.36
Offsite Miscellaneous Noncommute	Light duty truck, catalyst, gasoline	3	Collector	0.037	35	10.37	31.36
Offsite Delivery/Haul Truck	Heavy heavy-duty truck, diesel	40	Collector	0.037	35	3.24	0.00

Vehicle Type	ROG					
	Exhaust g/mi	Start-Up[d] g/trip	Hot Soak g/trip	Resting g/hr	Evap. Running g/mi	Diurnal g/hr
Onsite Pickup Truck	1.47	2.59	0.40	0.17	8.67	0.44
Onsite Dump Truck	2.57	0.00	0.00	0.00	0.00	0.00
Offsite Construction Commuter	0.29	2.59	0.40	0.17	1.24	0.44
Offsite Miscellaneous Noncommute	0.29	2.59	0.40	0.17	1.24	0.44
Offsite Delivery/Haul Truck	0.84	0.00	0.00	0.00	0.00	0.00

* ROG emissions are taken using VOC emission factors

Vehicle Type	NOx		PM_{10}				
	Exhaust g/mi	Start-Up[d] g/trip	Exhaust g/mi	Start-Up[d] g/trip	Tire Wear g/mi	Brake Wear g/mi	Paved Road Dust[b] g/mi
Onsite Pickup Truck	1.81	0.99	0.06	0.02	0.01	0.01	1.56
Onsite Dump Truck	28.30	0.00	1.51	0.00	0.04	0.01	0.00
Offsite Construction Commuter	0.97	0.99	0.01	0.02	0.01	0.01	0.46
Offsite Miscellaneous Noncommute	0.97	0.99	0.01	0.02	0.01	0.01	0.46
Offsite Delivery/Haul Truck	15.72	0.00	0.49	0.00	0.04	0.01	0.46

[a] All except paved road dust from ARB EMFAC2000 motor vehicle emission factor model, version 2.02, for calendar year 2002, summertime

[b] Emission factor [g/mi] = 7.26 (Silt Loading/2)$^{0.65}$ (Fleet Average Vehicle Weight/3)$^{1.5}$, from ARB Emission Inventory Methodology 7.9, Entrained Paved Road Dust (1997). Silt loadings and fleet average vehicle weight (2.4 tons) are from ARB Emissions Inventory Methodology.

Table 2
Construction Equipment Emission Factors

Onsite Equipment	Fuel Type	Rating (hp)	Load Factor (%)[b]	Emission Factor (lb/bhp-hr)[a]					Emission Rate (lb/hr)				
				CO	ROG	NO_X	SO_X	PM_{10}	CO	ROG	NO_X	SO_X	PM_{10}
Bulldozer	diesel	300	59	0.0187	0.0022	0.0152	0.0004	0.0009	3.32	0.39	2.69	0.06	0.16
Backhoe/Front End Loader	diesel	300	48	0.0187	0.0022	0.0152	0.0004	0.0009	2.70	0.32	2.19	0.05	0.13
Rubber Tired Crane	diesel	500	43	0.0187	0.0022	0.0152	0.0004	0.0009	4.03	0.47	3.27	0.08	0.19
Cherry Picker Hydraulic Crane	diesel	500	43	0.0187	0.0022	0.0152	0.0004	0.0009	4.03	0.47	3.27	0.08	0.19
Concrete Vibrator	electric	N/A	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Welding Machine	electric	N/A	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pipe Grinder	electric	N/A	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Compressor, 250 cfm	diesel	80	48	0.0187	0.0022	0.0152	0.0004	0.0009	0.72	0.08	0.58	0.01	0.03
Tractor/Loader/Backhoe, 1/2 CY	diesel	80	46.5	0.0187	0.0022	0.0152	0.0004	0.0009	0.70	0.08	0.57	0.01	0.03
Crane, 5 ton	diesel	62	43	0.0090	0.0030	0.0152	0.0004	0.0015	0.24	0.08	0.41	0.01	0.04
Welder	diesel	35	45	0.0110	0.0020	0.0152	0.0004	0.0010	0.17	0.03	0.24	0.01	0.02
Vibratory Compactor	diesel	70	57.5	0.0070	0.0020	0.0152	0.0004	0.0010	0.28	0.08	0.61	0.01	0.04
Roller, 5 ton	diesel	70	57.5	0.0070	0.0020	0.0152	0.0004	0.0010	0.28	0.08	0.61	0.01	0.04
Dump Truck	diesel	3.75	100.00	0.0335	0.0057	0.0152	0.0004	0.0033	0.13	0.02	0.06	0.00	0.01
Grinder	diesel	56	73.00	0.0200	0.0240	0.0152	0.0004	0.0010	0.82	0.98	0.62	0.01	0.04
Jackhammer	electric	N/A	N/A	0.0000	0.0000	0.0000	0.0000	0.0000	0.00	0.00	0.00	0.00	0.00

* ROG emissions are taken as VOC

[a] Federal 1996+ year emission standards for > 75 hp, California NO_X emission standard for all, 500 ppm sulfur content for SO_X, South Coast CEQA Air Quality Handbook, Table A9-8-B for all others

[b] South Coast CEQA Air Quality Handbook, Table A9-8-D

Table 3
Fugitive PM10 Emission Factors

Bulldozing

Emission Factor [lb/hr] = 0.75 x (silt content [%])$^{1.5}$ / (moisture)$^{1.4}$
Reference: AP-42, Table 11.9-1, July 1998

Parameter	Value	Basis
Silt Content	7.5	SCAQMD 1993 CEQA Air Quality Handbook, Overburden
Moisture	5.9	"Open Fugitive Dust PM10 Control Strategies Study," Midwest Research Institute, October 12, 1990.

Emission Factor (Uncontrolled)	1.284 lb/hr
Reduction from Watering Twice/Day	50%
Controlled Emission Factor	0.642 lb/hr

Motor Vehicles and Equipment on Unpaved Surfaces

Emission Factor [lb/mi] = 2.6 x (vehicle speed [mph] / 15) x (silt content [%] / 12) $^{0.8}$ x (vehicle weight [tons] / 3)$^{0.4}$ / (moisture [%] / 0.2)$^{0.3}$
Reference: AP-42, Section 13.2.2, September 1998

Parameter	Value	Basis
Silt Content	15	SCAQMD 1993 CEQA Air Quality Handbook, Overburden
Moisture	3	"Open Fugitive Dust PM10 Control Strategies Study," Midwest Research Institute, October 12, 1990.
Vehicle Weight	40	Assumption
Vehicle Speed	5	Typical value

Emission Factor (Uncontrolled)	1.296 lb/mi
Reduction from Watering Twice/Day	50%
Controlled Emission Factor	0.648 lb/mi

Storage Pile Wind Erosion

Emission Factor [lb/day-acre] = 0.85 x (silt content [%] / 1.5) x (365 / 235) x (percentage of time unobstructed wind exceeds 12 mph / 15)
Reference: Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures, EPA, September 1992

Parameter	Value	Basis
Silt Content	15	SCAQMD 1993 CEQA Air Quality Handbook, Overburden
Pct. time wind > 12 mph	100	Assumption

Emission Factor (Uncontrolled)	88.0 lb/day-acre
Reduction from Watering Twice/Day	50%
Controlled Emission Factor	44.0 lb/day-acre

Table 4
Construction Motor Vehicle Emissions

Vehicle Type	Miles/ Vehicle-Day	Starts/ Vehicle-Day	CO (lbs/ vehicle-day)	ROG (lbs/ vehicle-day)	NO_X (lbs/ vehicle-day)	SO_X (lbs/ vehicle-day)	PM_{10} (lbs/ vehicle-day)
Construction Commuter	40	2	1.05	0.17	0.09	0.00	0.04
Delivery/Haul Truck	40	2	0.29	0.07	1.39	0.00	0.09

Table 5
Motor Vehicle Usage During Construction

Vehicle Type	Number per Day						
	Mob.	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
Construction Commuter	5	5	5	5	5	5	5
Delivery/Haul Truck		2	2	2	2	1	2

* Based on 8 hour work day.

Table 6
Estimated Construction Emissions

	CO	ROG	NOX	SOX	PM10
Mobilization					
Construction Commuter	5.26	0.84	0.45	0.00	0.22
Delivery/Haul Truck	0.00	0.00	0.00	0.00	0.00
Other: None	0.00	0.00	0.00	0.00	0.00
pounds per day	5.26	0.84	0.45	0.00	0.22
pounds per stage	52.63	8.41	4.50	0.00	2.19
Stage 1					
Construction Commuter	5.26	0.84	0.45	0.00	0.22
Delivery/Haul Truck	0.57	0.15	2.77	0.00	0.18
Other: Tractor (2)	11.15	1.31	9.05	0.21	0.52
pounds per day	16.99	2.30	12.28	0.21	0.92
pounds per stage	84.93	11.51	61.38	1.05	4.60
Stage 2					
Construction Commuter	5.26	0.84	0.45	0.00	0.22
Delivery/Haul Truck	0.57	0.15	2.77	0.00	0.18
Other: None	0.00	0.00	0.00	0.00	0.00
pounds per day	5.83	0.99	3.22	0.00	0.40
pounds per stage	58.33	9.89	32.23	0.00	3.96
Stage 3					
Construction Commuter	5.26	0.84	0.45	0.00	0.22
Delivery/Haul Truck	0.57	0.15	2.77	0.00	0.18
Fugitive Dust (40 miles)	0.00	0.00	0.00	0.00	25.92
Other: Grinder (2)	13.08	15.70	9.95	0.23	0.65
pounds per day	18.91	16.69	13.17	0.23	26.97
pounds per stage	94.57	83.43	65.86	1.15	134.83
Stage 4					
Construction Commuter	5.26	0.84	0.45	0.00	0.22
Delivery/Haul Truck	0.57	0.15	2.77	0.00	0.18
Fugitive Dust (40 miles)	0.00	0.00	0.00	0.00	25.92
Other: Rollers (2)	4.51	1.29	9.80	0.23	0.64
pounds per day	10.34	2.28	13.02	0.23	26.96
pounds per stage	51.71	11.38	65.10	1.14	134.78
Stage 5					
Construction Commuter	5.26	0.84	0.45	0.00	0.22
Delivery/Haul Truck	0.29	0.07	1.39	0.00	0.09
Other: None	0.00	0.00	0.00	0.00	0.00
pounds per day	5.55	0.92	1.84	0.00	0.31
pounds per stage	27.74	4.58	9.18	0.00	1.54
Stage 6					
Construction Commuter	5.26	0.84	0.45	0.00	0.22
Delivery/Haul Truck	0.57	0.15	2.77	0.00	0.18
Other: None	0.00	0.00	0.00	0.00	0.00
pounds per day	5.83	0.99	3.22	0.00	0.40
pounds per stage	116.66	19.78	64.46	0.00	7.92
Overall Total					
Total pounds	486.57	148.98	302.71	3.34	289.82
Max pounds per day	18.91	16.69	13.17	0.23	26.97

Appendix B
Final 2002 RTIP

FINAL 2002 REGIONAL TRANSPORTATION IMPROVEMENT PROGRAM (RTIP) (FY 2002/2003-2007/2008) – STATE HIGHWAY PROJECTS[1]

ORANGE COUNTY

LEAD AGENCY	PROJECT ID	AIR BASIN	MODEL NO	PROGRAM CODE	RTE	POST BEG	MILES END	DESCRIPTION	FUND	YEAR	ENG	ROW	CONS	TOTAL	2002/03	2003/04	2004/05	2005/06-2007/08	PROJECT TOTAL	CONFORMITY CATEGORY
GARDEN GROVE	ORA981104	SCAB	0263	CAR63	22	7.8	.0	RECONSTRUCT HARBOR BLVD INTERCHANGE. 4 LANES EACH DIRECTION. (1/4 MILE BEFORE AND AFTER SR-22 RAMPS) 2 HOV LNES(1 E/B & 1 W/B) AND PROPOSED SR-22 HOV LANES.	DEMOT21	02/03	390	0	0	390	3159	5325	0	.0	8484	TCM
									CITY	02/03	104	0	1100	1204						
									LTF	02/03	0	275	1290	1565						
									DEMOT21	03/04	0	0	1110	1110						
									LTF	03/04	0	0	1300	1300						
									ORA-GMA	03/04	0	0	300	300						
									ORA-RIP	03/04	0	0	2615	2615						
ORANGE, CITY OF	ORA55282	SCAB	2401	CARH3	22	9.7	.0	BUILD NEW RAMP FROM THE SR-57 TO THE SR22 WEST BOUND (INCLS WIDENING OF LEWIS ST BRIDGE FROM LAMPSON TO GARDEN GROVE BL) & BUILD OFFRAMP FROM THE SR-57 DIRECTLY TO THE CITY DRIVE.	CITY	03/04	700	0	0	700	0	700	2059	.0	2759	<OTHER>
									CITY	04/05	0	0	2059	2059						
ORANGE, CITY OF	ORA990443	SCAB	0264	CARH3	22	10.5	.0	SR-22 AND CITY DRIVE INTERCHANGE IMPROVEMENTS. RECONFIGURE FREEWAY INTERCHANGE AT SR-22 FROM SR-57 TO LEWIS STREET -- FROM 6/0 TO 6/2 LANES (ADDING 2 HOV LANES)	CITY	02/03	0	1600	0	1600	1600	24791	0	.0	26391	TCM
									CITY	03/04	1650	0	20832	22482						
									ORA-GMA	03/04	0	0	250	250						
									ORA-RIP	03/04	0	0	1636	1636						
									PVT	03/04	0	0	423	423						
HUNTINGTON BEACH	ORA000149	SCAB		NCRH1	39	5.7	5.7	BEACH BLVD @ EDINGER. WIDEN S/E CORNER TO CONSTRUCT NB RT-TURN LANE TO EDINGER. 3 LANES TO 3 LANES.	ORA-IIP	02/03	0	0	418	418	418	0	0	.0	418	EXEMPT/TRAFFIC SIGNALIZATION
COSTA MESA	ORA000161	SCAB	0205	CAR63	55	1.5	2.0	NEWPORT BLVD. (SR-55 TO 17TH ST) - WIDENING FROM 6 TO 8 THROUGH LANES. WIDEN 1 LANE N/B FROM 17TH TO 19TH AND 1 LANE S/B FROM 19TH TO BROADWAY	STPL-R	02/03	320	0	0	320	860	0	0	.0	860	<OTHER>
									ORA-GMA	02/03	60	15	465	540						
COSTA MESA	ORA015	SCAB		NCRH1	55	5.3	5.3	BAKER STREET AND SR-55; N/B & S/B FRONTAGE ROAD IMPROVEMENTS. S/B FREE RIGHT TURN, N/B LEFT-TURN AND 2ND E/B LEFT.	CITY	03/04	90	0	610	700	0	700	0	.0	700	EXEMPT/TRAFFIC SIGNALIZATION
COSTA MESA	ORA016	SCAB	0265	NCRH1	55	5.8	5.8	PAULARINO AVE (SR-55 @ PAULARINO AVE) IN COSTA MESA INTERSECTION IMPROVEMENT. ADDING A N/B RAMP AND W/B RIGHT-TURN-LANE.	CITY	03/04	40	150	0	190	0	190	248	.0	438	EXEMPT/TRAFFIC SIGNALIZATION
									CITY	04/05	0	0	248	248						
COSTA MESA	ORA017	SCAB		NCRH1	55	5.8	5.8	PAULARINO AVE IN COSTA MESA. INTERSECTION IMPROVEMENT ADD S/B RIGHT-TURN LANE.	CITY	03/04	42	0	0	42	0	42	200	.0	242	EXEMPT/TRAFFIC SIGNALIZATION
									CITY	04/05	0	0	200	200						
SANTA ANA	550	SCAB	2204	CAR63	55	7.5	7.6	ALTON AVE IN SANTA ANA CONSTRUCT A NEW 4-LANE (2E/B AND 2W/B) OVERCROSSING & HOV ACCESS RAMPS @SR-55	CITY	02/03	1820	0	0	1820	3500	1500	1500	36600.0	43100	<OTHER>
									ORA-RIP	02/03	1680	0	0	1680						
									CITY	03/04	0	1500	0	1500						
									CITY	04/05	0	1500	0	1500						
									CITY	05/06	0	0	36600	36600						
TUSTIN	ORA55261	SCAB	0266	CARH3	55	9.0	9.4	NEWPORT AVENUE@ SR 55 INTERCHANGE MODIFY NORTHBOUND ROUTE 55 ON AND OFF RAMPS TO CONNECT TO NEWPORT AVE EXTENSION (frm 0 TO 6 LNS) (BTWN EDINGER & VALENCIA) (00-TUST-RIP-3190)	CITY	02/03	0	0	4282	4282	6345	0	0	.0	6345	<OTHER>
									ORA-RIP	02/03	0	0	2063	2063						

Note 1. Sorted by county, route, post miles, and project ID.

RTIP ID# RIV010208

TCWG Consideration Date March 25, 2008

Project Description *(clearly describe project)*
The California Department of Transportation (Caltrans) District 8, in cooperation with the Riverside County Transportation Commission (RCTC) and the City of Corona, proposes to replace the existing two-lane Interstate 15 (I-15)/Cajalco Road overcrossing with a new six-lane overcrossing, eliminating the gap on Cajalco Road. Caltrans is the lead agency for both the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) for the proposed project. The project area is located in the City of Corona, along I-15. The I-15/Cajalco Road project area extends along Cajalco Road from Temescal Canyon Road to Bedford Canyon Road, and along I-15 from El Cerrito Road to 3,500 feet south of Cajalco Road.

The proposed reconstruction of the I-15/Cajalco Road interchange is intended to be fully compatible with and not preclude the construction of the planned junction of I-15 and the proposed Mid County Parkway (MCP) project. The MCP project is a major, limited-access transportation facility from I-15 on the west to State Route 79 (SR-79) on the east. The MCP project is currently in the Project Approval/Environmental Document (PA/ED) phase and is scheduled for completion in early 2009

Type of Project *(use Table 1 on instruction sheet)*
Reconfigure existing interchange

County	**Narrative Location/Route & Postmiles** I-15 PM 36.64-37.19
Riverside	**Caltrans Projects – EA#** 08-0J610

Lead Agency: California State Department of Transportation

Contact Person	**Phone#**	**Fax#**	**Email**
Bruce Ko, Project Manager	909-383-4077		Bruce_ko@dot.ca.gov

Hot Spot Pollutant of Concern **(check one or both)** PM2.5 x PM10 x

Federal Action for which Project-Level PM Conformity is Needed *(check appropriate box)*

x CATEGORICAL EXCLUSION (NEPA)	**EA or Draft EIS**	**FONSI or Final EIS**	**PS&E or Construction**	**Other**

Scheduled Date of Federal Action: December 2008

NEPA Delegation – Project Type *(check appropriate box)*

EXEMPT	**Section 6004 – Categorical Exemption**	x **Section 6005 – Non-Categorical Exemption**

Current Programming Dates *(as appropriate)*

	PE/Environmental	ENG	ROW	CON
Start	10/2006	12/2008	03/2009	10/2010
End	11/2008	06/2010	06/2010	06/2011

Project Purpose and Need (Summary): *(attach additional sheets as necessary)*
Accelerated growth and development in the vicinity of the I-15/Cajalco Road interchange and nearby areas of the City of Corona are projected to generate traffic volumes that would exceed the capacity of the existing interchange in the near future. At the current rate of growth, traffic volumes at the interchange are projected to increase by as much as 100 percent by 2035. Existing ramp-street intersections are currently operating at level of service (LOS) C and are projected to deteriorate to LOS F or breakdown conditions by 2035. The operational breakdown of the interchange would lead to increased congestion, longer commute times, increased energy consumption, increased air pollution, higher accident rates, and the operational degradation of the interstate and local arterials.

Accident rates at the existing exit and entrance ramps within the project limits currently exceed average rates, which are projected to increase as traffic circulation and egress and ingress maneuvers become increasingly difficult and more restrictive. The existing accident rate at the Cajalco Road northbound exit ramp is approximately 50 percent higher than the average rate for similar types of facilities. Broadside collisions account for 50 percent of the accidents at this ramp, followed by overturn at 33 percent and head-on collision at approximately 17 percent.

The safety of the traveling public and the mobility and the economic vitality of the area will continue to be impacted unless the I-15/Cajalco Road interchange is improved to adequately address the projected increased traffic demand.

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*
The existing land uses within the vicinity of the project consist of residential developments, commercial structures, and agricultural fields. There are no large generators of diesel truck traffic within the project area.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

LOS F, Total AADT = 176,700, Truck AADT = 8,835 (5 %), Year 2015, Along I-15

Volumes apply to no build and build conditions

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

LOS F, Total AADT = 208,000, Truck AADT = 10,400 (5 %), Year 2035, Along I-15

Volumes apply to no build and build conditions

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

No Build: LOS D/F, Total AADT = 24,800, Truck AADT = 496 (2 %), Year 2015, Along Cajalco Road

Build: LOS A/B, Total AADT = 24,800, Truck AADT = 496 (2 %), Year 2015, Along Cajalco Road

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

No Build: LOS F/F, Total AADT = 44,100, Truck AADT = 882 (2 %), Year 2035, Along Cajalco Road

Build: LOS A/B, Total AADT = 44,100, Truck AADT = 882 (2 %), Year 2035, Along Cajalco Road

Describe potential traffic redistribution effects of congestion relief *(impact on other facilities)* See attached analysis.
Comments/Explanation/Details *(attach additional sheets as necessary)* The proposed project would increase the capacity of the Cajalco Road overcrossing from two to six lanes. East and west of the project interchange Cajalco Road is a four lane arterial. By eliminating the existing bottleneck the proposed project will improve traffic flow along Cajalco Road. As the proposed roadway widening is a gap closure project the traffic analysis (VRPA, March 2008) predicts that the traffic volumes along Cajalco Road would not increase over the no project conditions.

Particulate Matter (PM_{10} and $PM_{2.5}$) Analysis

The proposed project is within a nonattainment area for federal $PM_{2.5}$ and PM_{10} standards. Therefore, per 40 CFR Part 93 analyses are required for conformity purposes. However, the EPA does not require hot-spot analyses, qualitative or quantitative, for projects that are not listed in section 93.123(b)(1) as an air quality concern. The project does not qualify as a project of air quality concern (POAQC) because of the following reasons:

i. The proposed project is not a new or expanded highway project. The proposed project is an interchange improvement project that does not increase the capacity of I-15. This type of project improves freeway interchange operations by reducing traffic congestion and improving merge operations. Based on the *Traffic Analysis* (VRPA Technologies, Inc., March 2008), the proposed project would increase the capacity of Cajalco Road. However, the traffic volumes along Cajalco Road would not exceed the 125,000 average daily trips threshold for a POAQC. In addition, as the project interchange serves a primarily residential area, the truck traffic percentage would not exceed the eight percent threshold for POAQC. The future traffic volumes along Cajalco Road are shown in Table A.

ii. The proposed project does not affect intersections that are at level of service (LOS) D, E, or F with a significant number of diesel vehicles. Based on the *Traffic Analysis*, the proposed project would reduce the delay and improve the LOS at intersections within the project vicinity. The LOS conditions in the project vicinity with and without the proposed project are shown in Tables B and C.

iii. The proposed project does not include the construction of a new bus or rail terminal.

iv. The proposed project does not expand an existing bus or rail terminal.

Therefore, the proposed project meets the Clean Air Act requirements and 40 CFR 93.116 without any explicit hot-spot analysis. The proposed project would not create a new, or worsen an existing, $PM_{2.5}$ or PM_{10} violation.

Table A: Average Daily Traffic Volumes (Total AADT/Truck AADT)

Roadway Link	2015	2035
Cajalco Road west of Bedford Canyon Road	7,700 (154)	10,800 (216)
Cajalco Road between Bedford Canyon Road and I-15	12,900 (258)	14,800 (296)
Cajalco Road between I-15 and Grand Oaks Driveway	24,800 (496)	44,100 (882)
Cajalco Road between Grand Oaks Driveway and Temescal Canyon Road	24,800 (496)	44,100 (882)
Cajalco Road east of Temescal Canyon Road	25,700 (514)	55,600 (1,112)

Source: VRPA, March 2008.

Table B: 2015 Intersection Levels of Service

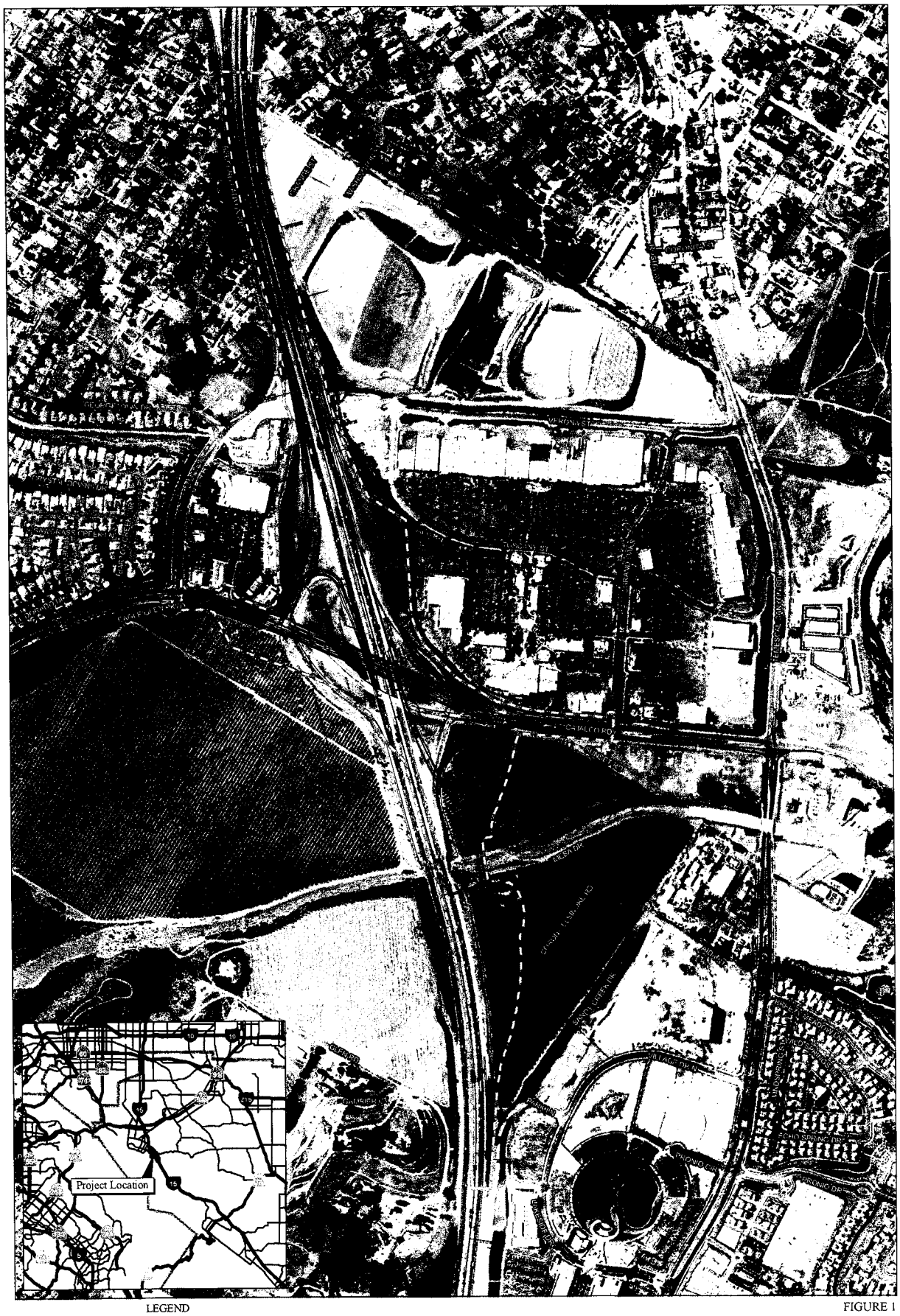
	Intersection	No Build		Build	
		Delay (sec) AM/PM	LOS AM/PM	Delay (sec) AM/PM	LOS AM/PM
1.	Bedford Canyon & Cajalco Road	13.8 / 19.6	B / B	7.6 / 12.2	A / B
2.	1-15 SB Ramps & Cajalco Road	52.1 / > 80.0	D / F	9.4 / 17.1	A / B
3.	I-15 NB Ramps & Cajalco Road	> 80.0 / > 80.0	F / F	3.4 / 7.0	A / A
4.	Grand Oaks Driveway & Cajalco Road	17.5 / 16.4	B / B	8.1 / 13.9	A / B
5.	Temescal Canyon Road & Cajalco Road	29.6 / 29.8	C / C	22.8 / 20.4	C / C

Notes:
LOS = Level of Service

Table C: 2035 Intersection Levels of Service

	Intersection	No Build		Build	
		Delay (sec) AM/PM	LOS AM/PM	Delay (sec) AM/PM	LOS AM/PM
1.	Bedford Canyon & Cajalco Road	20.3 / 16.4	C / B	14.2 / 16.1	B / B
2.	1-15 SB Ramps & Cajalco Road	> 80.0 / > 80.0	F / F	16.7 / 19.6	B / B
3.	I-15 NB Ramps & Cajalco Road	> 80.0 / > 80.0	F / F	7.4 / 11.6	A / B
4.	Grand Oaks Driveway & Cajalco Road	24.6 / > 80.0	C / F	8.9 / 22.3	A / C
5.	Temescal Canyon Road & Cajalco Road	59.2 / 62.3	E / E	52.1 / 53.4	D / D

Notes:
LOS = Level of Service



LEGEND

Project Area

FIGURE 1

0 300 600

FEET

SOURCE: AirPhotoUSA (4/07)

I:\JCV0701\GIS\FIGURE_1_11x17.mxd (2/26/08)

I-15/Cajalco Road Interchange

Project Location Map

PM 36.64/37.19 EA 0J610

4.5 REVIEW OF QUALITATIVE PM HOT SPOT ANALYSIS

$PM_{2.5}$ Hot-spot Project-Level Conformity Determination

for the

Schuyler Heim Bridge Replacement and SR-47 Expressway Project

This document is a revision to the $PM_{2.5}$ Hotspot Analysis submitted in October 2006 to incorporate the project scope changes of the newly added Schuyler Heim Bridge auxiliary lanes and the flyover. The original $PM_{2.5}$ hot-spot analysis was approved by the SCAG Transportation Conformity Work Group (TCWG) at the October 2006 meeting.

This document provides the qualitative $PM_{2.5}$ hot-spot analysis required to demonstrate project-level conformity. The proposed action would be considered as a project of air quality concern based on the criteria listed in the Final Conformity Rule (40 CFR 93.123 (b)(1)). Therefore, the following qualitative project-level hot-spot assessment was conducted to assess whether the project would cause or contribute to any new localized $PM_{2.5}$ violations, or increase the frequency or severity of any existing violations, or delay timely attainment of the $PM_{2.5}$ national ambient air quality standards (NAAQS). This project is identified as a Transportation Control Measure (TCM) project in the RTP and RTIP; and its timely implementation is a crucial element in reduction of air pollutant emissions from roadway transportation sources.

Regulatory Background

On March 10, 2006, EPA issued amendments to the Transportation Conformity Rule to address localized impacts of particulate matter: "*$PM_{2.5}$ and PM_{10} Hot-Spot Analyses in Project-level Transportation Conformity Determinations for the New $PM_{2.5}$ and Existing PM_{10} National Ambient Air Quality Standards*" (71 FR 12468). This amendment requires the assessment of localized air quality impacts in PM_{10} and $PM_{2.5}$ nonattainment and maintenance areas for federally-funded or approved transportation projects of air quality concern. This assessment of localized impacts (i.e., "hot-spot analysis") examines potential air quality impacts on a scale smaller than an entire nonattainment or maintenance area. Such an analysis is a means of demonstrating that a transportation project meets Clean Air Act (CAA) conformity requirements to support state and local air quality goals. Since the proposed action is located in a federal nonattainment area for $PM_{2.5}$, localized impacts must be assessed.

The EPA specified in 40 CFR 93.123(b)(1) of the Final Conformity Rule that projects of air quality concern are certain highway and transit projects that involve significant levels of

diesel vehicle traffic, or any other project that is identified in the $PM_{2.5}$ State Implementation Plan (SIP) as a localized air quality concern. According to 40 CFR 93.123(b)(2) and (4), a quantitative analysis for applicable projects is not required until EPA releases modeling guidance in the Federal Register. However, a qualitative hot-spot analysis is required for projects of air quality concern. This qualitative analysis of localized $PM_{2.5}$ impacts was prepared because the proposed action has the potential to be a project of air quality concern.

This qualitative analysis was based on directly emitted emissions including tailpipe, break wear, and tire wear, because the direct emissions could potentially cause nearby hot-spots, or localized areas of elevated concentration. Re-entrained road dust was also included in the analysis. The emission inventories presented in the SCAQMD 2007 AQMP show that emissions from paved roads is the single largest contributor to the directly emitted $PM_{2.5}$ emissions. Construction-related $PM_{2.5}$ emissions were not included in this hot-spot analysis because these emissions would be considered temporary since construction would last less than 5 years (40 CFR 93.123(c)(5)). Secondary $PM_{2.5}$ would be associated with regional impacts and therefore are not included in a hot-spot analysis.

Project Description

The Federal Highway Administration (FHWA) and California Department of Transportation (Caltrans) are proposing to replace the existing Commodore Schuyler F. Heim Bridge (Schuyler Heim Bridge) to meet current seismic criteria. Concurrently, the Alameda Corridor Transportation Authority (ACTA) proposes to construct an expressway along State Route (SR-) 47 or SR-103 to provide a high-capacity alternative route for traffic between Terminal Island and Interstate (I-) 405. In addition, a two-lane, elevated flyover structure to divert traffic bound for northbound SR-47 directly onto the new bridge from eastbound Ocean Boulevard is proposed. The Schuyler Heim Bridge is located within the City and Port of Long Beach, and Terminal Island is co-located within the Port of Long Beach and Port of Los Angeles. The project is scheduled to be open for traffic in 2011 and the flyover would be complete in 2015.

The proposed action is to improve traffic conditions between Terminal Island and major traffic arterials on the mainland to the north, primarily within the cities of Long Beach and Los Angeles. This project is identified as a Transportation Control Measure (TCM) project in the RTP and RTIP; and its timely implementation is a crucial element in reduction of air pollutant emissions from roadway transportation sources. Six alternatives have been proposed for analysis in an Environmental Impact Statement/ Environmental Impact Report (EIS/EIR) to address the proposed action. There are four build alternatives, one transportation system management (TSM) alternative, and one no build alternative. According to the Transportation Conformity Rule (40 CFR 93.123(b)(1) (i)), this project would be classified as a new or expanded highway project that has a significant number of or significant increase in diesel vehicles. The project alternatives are described in the following sections.

Alternative 1: Bridge Replacement and Expressway

This alternative would replace the existing Schuyler Heim Bridge to meet current seismic criteria and provide an elevated through-lane (Ocean Boulevard/SR-47 flyover) from

eastbound Ocean Boulevard onto northbound SR-47. This alternative also includes construction of a new SR-47 expressway to provide a high-capacity alternative route along the Alameda Corridor for traffic between Terminal Island and Alameda Street, south of Pacific Coast Highway. The Schuyler Heim Bridge is a major traffic route and connects Terminal Island within the Ports of Long Beach and Los Angeles to the mainland cities of Long Beach and Los Angeles. The bridge is located within the City of Los Angeles and through property owned by the Port of Long Beach.

With this alternative, a new fixed-span bridge would be constructed primarily within the existing bridge right-of-way (ROW) (Caltrans Highway Easement [HE(C)]), but toward the east to avoid impacts to the railroad on the Badger Avenue Bridge immediately to the west. The existing Schuyler Heim Bridge (a lift bridge) would be demolished. The replacement bridge would be slightly wider (13 meters [m] [43 feet (ft)]) than the existing bridge due to the addition of standard shoulders, which are not present on the existing bridge. The replacement bridge would include three 3.6-m (12-ft) lanes and 3-m (10-ft) shoulders in the northbound direction, and three 3.6-m (12-ft) lanes, one 3.6-m (12-ft) auxiliary lane, and 3-m (10-ft) shoulders in the southbound direction. Bridge construction would include a southbound off-ramp and northbound on-ramp at New Dock Street on Terminal Island, as well as a northbound off-ramp and southbound on-ramp at Henry Ford Avenue on the mainland side of the bridge. With this alternative, the new bridge would be supported by four piers in the channel, with a minimum vertical clearance of 14.3 m (47 ft) over the mean high water level (MHWL). This clearance would be maintained for the width of the navigable channel, which would be 54.9 m (180 ft).

The Ocean Boulevard/SR-47 flyover will be a two-lane, elevated structure to divert traffic bound for northbound SR-47 directly onto the new bridge from eastbound Ocean Boulevard. The purpose of the flyover is to enable this traffic to avoid the signalized Ocean Boulevard/ SR-47 intersection. Under Alternative 1, the flyover will begin on Terminal Island, about 1,200 m (3,900 ft) west of the Ocean Boulevard/SR-47 intersection, extend eastward along the south side of Ocean Boulevard, then turn north, cross over Ocean Boulevard and onto the new bridge. The west end of the flyover will be at grade, then rise to a maximum elevation of 21 m (69 ft) to cross over Ocean Boulevard, then descend to an elevation of 12.9 m (42.4 ft) to join the new bridge. The elevated portions of the flyover will be supported by eight single-column bents and two 2-column outrigger bents. Each column is approximately 2.4 m (8 ft) in diameter. The structure will consist of 11 spans, with lengths that range between 57 m (186 ft) and 73 m (240 ft). The flyover will have an overall length of 1,550 m (5,084 ft), ending at the northerly end point (gore point) of the northbound New Dock Street on-ramp onto the bridge. The left lane of the flyover will converge with the SR-47 through-lane to the left; the right lane of the flyover will continue as a northbound SR-47 through-lane and will have the option to continue to SR-47 or SR-103. The flyover will be located entirely within the City and Port of Long Beach.

The new SR-47 Expressway would begin on Terminal Island, at the intersection of SR-47 and Ocean Boulevard, extending north over New Dock Street and onto the Schuyler Heim Bridge replacement. A new northbound on-ramp would be constructed from New Dock Street, and a new southbound off-ramp would be constructed to New Dock Street, as described above. The expressway would extend northward to Alameda Street, south of the intersection with Pacific Coast Highway, a distance of approximately 2.7 kilometers (km)

(1.5 miles [mi]). The expressway would be a four-lane, limited access roadway. It would grade-separate five at-grade railroad crossings and three signalized intersections along its length. A segment of the expressway would be constructed as an elevated viaduct over Henry Ford Avenue and Alameda Street and return to grade at Alameda Street, just south of Pacific Coast Highway. Under this alternative, connectivity to SR-103 would be maintained. This alternative includes improvements to the Alameda Street/Wardlow Road connector and to Alameda Street north and south of the connector.

Alternative 1A: Haunch Bridge Design

Alternative 1A is a structural variation of Alternative 1. The main purpose of this alternative is to improve the aesthetics of the replacement bridge over the Cerritos Channel and span a greater horizontal distance across the channel between columns. This is accomplished by increasing the span lengths over the channel and arching the superstructure soffits (the bottom of the bridge structure). Under this alternative, the new bridge would be supported by two piers (four columns) in the Cerritos Channel, compared to four piers (eight columns) under Alternative 1; and the minimum vertical clearance between the piers would be of 14.3 m (47 feet). This clearance would be maintained for the width of the navigable channel, which would be 54.9 m (180 feet).

Other aspects of this alternative, including the flyover, would be the same as Alternative 1.

Alternative 2: SR-103 Extension to Alameda Street

With this alternative, the existing Schuyler Heim Bridge would be demolished and a new fixed-span bridge and flyover would be constructed, as described under Alternative 1. With this alternative, the right lane of the flyover would continue to SR-103 after crossing the new bridge. Additionally, modifications to the northbound and southbound approaches to the bridge would be constructed.

This alternative also would extend SR-103 to the northwest on a four-lane elevated viaduct to join Alameda Street between Sepulveda Boulevard and I-405. Improvements to SR-103 would begin approximately 3.2 km (2 mi) north of the Schuyler Heim Bridge and extend a distance of approximately 2.6 km (1.6 mi). The elevated viaduct would cross over the Union Pacific Railroad manual yard and San Pedro Branch, through the Southern California Edison (SCE) utility corridor, across the Los Angeles Harbor Department Warehouse 16/17 area, over Sepulveda Boulevard, then parallel the western boundary of the Intermodal Container Transfer Facility (ICTF) to the centerline of Alameda Street. The viaduct would slope to grade south of the Wardlow Road ramps to I-405. Improvements would be made to the existing SR-103 to accommodate the southerly end connection of the viaduct and to SR-47 to accommodate the northerly end connection of the viaduct. This alternative also includes widening the Alameda Street/Wardlow Road connector and improvements to Alameda Street north and south of the connector.

Alternative 3: Bridge Avoidance

This alternative would preserve the existing Schuyler Heim Bridge and construct a new fixed-span bridge on an alignment east of the existing bridge, and construct the flyover as described for Alternative 1. Under this alternative, the new bridge would have the same lane configuration as the replacement bridge for Alternative 1.

This alternative includes seismic retrofit of the existing Schuyler Heim Bridge, which would remain standing but unused. The retrofit would be for safety purposes, to avoid demolition of a historic resource, and ensure that the existing bridge would not collapse and result in safety hazards or damage to the new bridge or to the adjacent Badger Avenue Bridge. However, according to the U.S. Coast Guard, when a bridge is no longer used for its permitted purpose of providing land transportation, the bridge shall be removed from the waterway. Therefore, removal of the existing Schuyler Heim Bridge would be included as a condition of the federal permit for the replacement bridge.

With this alternative, a new SR-47 Expressway would be constructed north of the new fixed-span bridge, as described under Alternative 1, and connectivity with SR-103 would be maintained. Improvements to Alameda Street and the Wardlow Road connector would be the same as described under Alternative 1.

Alternative 4: Bridge Replacement Only

This alternative would replace the existing Schuyler Heim Bridge (lift bridge) with a fixed-span bridge largely along the existing bridge alignment, and the existing Schuyler Heim Bridge would be demolished, as would occur under Alternative 1.

With this alternative, no roadway improvements would occur. With this alternative, therefore, the SR-47 Expressway described in Alternative 1 would not be constructed; and the SR-103 extension to Alameda Street described in Alternative 2 would not be constructed. This alternative also does not include the flyover.

Alternative 5: Transportation System Management

This alternative is designed to identify low-cost, easily implementable improvements as an alternative to construction of more expensive improvements. For this project, the TSM alternative focuses on improvements to routes that parallel the proposed SR-47 Expressway, and that serve the same trips. These trips include trucking drayage trips to and from the ICTF, and trips destined to and from the Ports via Alameda Street, Henry Ford Avenue, and SR-47. The TSM alternative would include measures to improve capacity and traffic circulation at the Port of Long Beach and Port of Los Angeles through policy changes and use of the latest technologies. With this alternative, capital investment would be minimal compared to the previous alternatives addressed.

The TSM alternative for this project includes the following key elements:

- Intelligent Transportation Systems (ITS): These would be systems applications in and around the Port area, with special emphasis on truck movements. These include measures to improve traffic circulation through traffic control, incident management, traffic surveillance, and traffic information dissemination with the aid of ITS devices and systems.
- Lower-cost roadway and intersection improvements: Measures include restriping to provide additional turn lanes and acceleration lanes and traffic signalization improvements, primarily within existing ROWs.
- Minor roadway widening: There also could be peak-hour parking prohibitions to remove midblock bottlenecks along selected roadways.

This alternative would not result in the increased ability of the Schuyler Heim Bridge to withstand a major earthquake. In the event of a major earthquake that would render the Schuyler Heim Bridge unusable, there are only two other access routes to and from Terminal Island. In the event the Schuyler Heim Bridge would become unusable, a TSM alternative would not be effective in reducing roadway demand or in redirecting Terminal Island traffic to other routes.

This alternative would not result in physical improvement to or replacement of the Schuyler Heim Bridge. Therefore, this alternative: (1) would not provide a link from the mainland to Terminal Island that would ensure ground and vessel transportation immediately following a major earthquake, (2) would not provide for safety improvements for bridge traffic, (3) would not improve operational or design features of the bridge, and (4) would not minimize future maintenance and operational costs of the Schuyler Heim Bridge.

Alternative 6: No Build Alternative

Under this alternative, there would be changes to the existing Schuyler Heim Bridge or local roadway system. The existing Schuyler Heim Bridge would continue to be seismically inadequate and subject to damage or collapse under strong seismic conditions. Maintenance activities would continue and would include application of protective coatings; lift mechanism repairs; deck resurfacing; and other, similar, maintenance activities. The bridge is expected to continue to deteriorate over time as its structure is eroded further and as various magnitude earthquakes are experienced. At some point in the future, the bridge may need to be demolished and replaced solely to avoid safety hazards.

Hot-Spot Analysis Methodology

The qualitative hot-spot analysis was performed following the *Transportation Conformity Guidance for Qualitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas* (EPA, March 2006) [PM Guide]. The proposed action is located in Los Angeles County, which is designated as nonattainment for the federal $PM_{2.5}$ standard and is required to attain and maintain the NAAQS. The current $PM_{2.5}$ 24-hour standard (35 $\mu g/m^3$) became effective on December 17, 2006. However, the nonattainment designations are based on the previous 24-hour standard of 65 $\mu g/m^3$. Therefore, $PM_{2.5}$ conformity for the proposed action was evaluated for the 24-hour standard of 65 $\mu g/m^3$ and annual standard of 15 $\mu g/m^3$.

Based on the project types listed in the PM Guide, the proposed action would be categorized as a new or expanded highway project that would have a significant number of diesel vehicles, and would be affecting intersections that are at Level of Service (LOS) D, E, or F with a significant number of diesel vehicles. The proposed action would be considered a project of air quality concern based on the criteria listed in the Final Conformity Rule (40 CFR 93.123 (b)(1)). Therefore, a qualitative project-level hot-spot assessment was conducted to assess whether the project will cause or contribute to any new localized $PM_{2.5}$ violations, or increase the frequency or severity of any existing violations, or delay timely attainment of the $PM_{2.5}$ NAAQS.

This analysis was based on directly emitted emissions including tailpipe, break wear, and tire wear, because the direct emissions could potentially cause nearby hot-spots or localized

areas of elevated concentration. Re-entrained road dust was also included in the analysis. The emission inventories presented in the SCAQMD 2007 AQMP show that emissions from paved roads is the single largest contributor to the directly emitted $PM_{2.5}$ emissions. Construction-related $PM_{2.5}$ emissions were not included in this hot-spot analysis because these emissions would be considered temporary since construction would last less than 5 years (40 CFR 93.123(c)(5)). Secondary $PM_{2.5}$ would be associated with regional impacts and therefore are not included in a hot-spot analysis.

Existing Air Quality

The closest monitoring station to the project area is the North Long Beach Monitoring Station (approximately 5 miles northeast of Schuyler Heim Bridge) and provides ambient air quality data representative of local conditions. As shown in Table 1, the maximum 24-hour $PM_{2.5}$ concentration measured at the North Long Beach station during the years of 2001 to 2006, inclusive, was 115.2 $\mu g/m^3$ in 2003. The maximum annual concentration (arithmetic mean) for the same time period was 21.2 $\mu g/m^3$ in 2001. The annual average $PM_{2.5}$ NAAQS was exceeded in 5 of the 6 years, and the 24-hour average $PM_{2.5}$ NAAQS was exceeded in 3 of the 6 years. However, the $PM_{2.5}$ concentrations in the Long Beach area have been declining over the last 6 years, with a 33percent decrease of the annual concentrations.

TABLE 1
Monitoring Data from North Long Beach Station

Averaging Time	Standard (NAAQS)	$PM_{2.5}$ Concentration ($\mu g/m^3$)					
		2001	2002	2003	2004	2005	2006
Highest 24-hour	65[a]	72.9	62.7	115.2	66.6	53.8	58.5
Exceedances of the 24-hour Standard[b]		1	0	3	1	0	0
Annual Average	15	21.2	19.5	18	17.9	15.9	14.1

Source: CARB, 2008, www.arb.ca.gov/adam/welcome

Note:

a. Although the current federal 24-hour $PM_{2.5}$ standard is 35 $\mu g/m^3$, conformity determinations are based on the 65 $\mu g/m^3$ because the $PM_{2.5}$ nonattainment designation is based on the old standard.
b. The $PM_{2.5}$ exceedances were based on the old 24-hour standard of 65 $\mu g/m^3$.

The following discussion demonstrates that $PM_{2.5}$ concentrations at the North Long Beach monitoring station are representative of the project area. The traffic data near the North Long Beach monitoring station and the Long Beach-East Pacific Coast Highway monitoring station were reviewed to evaluate the relationship between traffic conditions and monitoring data. The Long Beach-East Pacific Coast Highway station was selected for comparison since it is located closer to the project area than the North Long Beach station. However, because the Long Beach-East Pacific Coast Highway station has only been operating since 2003, data from this station were not used in the hotspot analysis.

The annual average daily traffic (AADT) and truck percentages near the North Long Beach monitoring station were reviewed. The North Long Beach station is located approximately

0.5 mile north of I-405 and one mile east of the I-405/I-710 junction. For the year 2006, the AADT at the I-405/I-710 junction was 290,000 (Caltrans, 2008). In addition, the truck AADT (3, 4, and 5 axle trucks) was 8,606, or 3 percent of the total AADT (Caltrans, 2008). For comparison, the Long Beach-East Pacific Coast Highway monitoring station is located approximately 1 mile east of the Pacific Coast Highway (PCH) /I-710 junction. For the year 2006, the AADT at the PCH/ I-710 junction was 48,000 (Caltrans, 2008). In addition, the truck AADT (3, 4, and 5 axle trucks) was 7,081, or 15 percent of the total AADT (Caltrans, 2008). A review of the traffic data has shown that the truck volumes are similar for both monitoring stations.

In addition, the $PM_{2.5}$ monitoring values at the Long Beach-East Pacific Coast Highway monitoring station are similar to those at the North Long Beach monitoring station. For the years 2004, 2005, 2006 the 24-hour $PM_{2.5}$ concentrations measured at the Long Beach-East Pacific Coast Highway were 59.7 $\mu g/m^3$, 50.8 $\mu g/m^3$, and 53.6 $\mu g/m^3$, respectively. Comparing these concentrations to the concentrations reported in Table 1 for the North Long Beach station show the values are similar. Therefore, since the truck percentages and monitoring data at the North Long Beach station and Long Beach-East Pacific Coast Highway station are similar, the North Long Beach station reflects the same traffic conditions as at the project location, and the monitoring data are shown to be representative of ambient air quality for the project area.

Traffic Condition Improvement by Proposed Action

The purpose of building the SR-47 Expressway or the SR-103 Extension, along with the Schuyler Heim Bridge replacement, is to reduce traffic congestion on local surface streets between Terminal Island and Pacific Coast Highway as well as on I-110 and I-710. The project would also improve traffic conditions by eliminating at-grade railroad crossings and signalized intersections.

Currently, to connect from Terminal Island to Alameda Street, vehicles must travel 1.5 km (0.9 mi) north from Ocean Boulevard, then exit at the Henry Ford Avenue off-ramp and travel north through local streets, signalized intersections, and railroad crossings for about 2.0 km (1.2 mi) before joining Alameda Street just south of Pacific Coast Highway. Alameda Street continues north of Pacific Coast Highway for 4.0 km (2.5 mi) and connects to the I-405. About 5.5 km (3.4 mi) north of I-405, Alameda Street connects to the Artesia Freeway (SR-91).

The SR-47 Expressway (Alternatives 1 and 1A) would be built upon a network of local streets by constructing a high-capacity expressway connecting the Ocean Boulevard Interchange with Alameda Street at Pacific Coast Highway. When complete, the 2.7 km (1.7 mi) expressway would provide the missing link between the Ocean Boulevard interchange on Terminal Island and Alameda Street on the mainland. This link would allow traffic to continue north to connect to Pacific Coast Highway, I-405, and/or SR-91. The proposed expressway would also help maximize use of the recently completed six-lane Alameda Street. In addition, the Ocean Boulevard/SR-47 flyover will divert traffic bound for northbound SR-47 directly onto the new bridge from eastbound Ocean Boulevard. The flyover would enable this traffic to avoid the signalized Ocean Boulevard/SR-47 intersection.

The SR-103 Extension (Alternative 2) is an alternative to the SR-47 Expressway, and would connect existing SR-103, beginning about 0.8 km (0.5 mi) north of Pacific Coast Highway, to Alameda Street at a point about 0.8 km (0.5 mi) south of the San Diego Freeway (I-405). The right lane of the flyover described above would continue to SR-103 after crossing the new bridge.

Alternative 3 is the bridge avoidance option, and would have the same traffic conditions as Alternative 1. Alternative 4 is the bridge replacement only option which would not affect the traffic conditions, comparable to the No Build alternative. Alternative 5 was not evaluated in this report because no traffic analysis was done for this alternative.

As a result of the proposed action, the delays due to traffic congestion would be reduced and the average vehicle travel speed would slightly increase in the project area. Both of these effects would translate into decreased vehicle emissions. In 2030, the LOS at the intersections within the project area would be improved by implementing the build alternatives 1, 1A, 2, and 3. Table 2 compares the PM peak hour intersection conditions of the No Build alternative to the build alternatives. Among the 22 intersections analyzed, the LOS of Alternatives 1, 1A, and 3 would improve at six intersections compared to the No Build alternative. The LOS of Alternative 2 would improve at four of the intersections. Two intersections, 223rd Street/ Alameda Street connector ramp at Alameda Street and the 223rd Street and I-405 southbound ramps, would have a worse LOS when compared to the No Build alternative.

TABLE 2
2030 PM Peak Intersection Conditions (PCE)

Intersections	Alternative 6 (No Build), Alternative 4	Alternatives 1, 1A, 3	Alternative 2
SR-47 & New Dock SB Off-Ramp1	B	B	B
SR-47 & New Dock NB On-Ramp1	E	C	C
SR-47 & Henry Ford Ramps	F	C	E
Henry Ford Ave & Anaheim St	F	F	F
Henry Ford Ave & Denni St	D	C	D
Alameda St & Anaheim St	F	F	F
Alameda St / PCH Connector Ramp n/o PCH	F	F	B
PCH / Alameda St Connector Ramp e/o Alameda St	F	F	E
Alameda St / Sepulveda Blvd Connector Ramp n/o Sepulveda	F	F	F
Sepulveda Blvd / Alameda St Connector Ramp e/o Alameda St	F	E	E
Alameda St / 223rd St Connector Ramp s/o 223rd St	F	F	F
223rd St / Alameda St Connector Ramp e/o Alameda St	E	F	F
223rd St & I-405 SB Ramps	B	C	C

TABLE 2
2030 PM Peak Intersection Conditions (PCE)

Intersections	Alternative 6 (No Build), Alternative 4	Alternatives 1, 1A, 3	Alternative 2
Alameda St & I-405 NB Ramps	C	C	C
Alameda St / Carson St Connector Ramp s/o Carson St	C	B	C
Carson St / Alameda St Connector Ramp e/o Alameda St	A	A	A
Alameda St / Del Amo Blvd Connector Ramp s/o Del Amo	D	C	C
Del Amo Blvd / Alameda St Connector Ramp e/o Alameda St	C	A	B
Alameda St & SR-91 EB Ramps	A	A	A
Alameda St & Artesia Blvd n/o Artesia Blvd	A	A	A

Data provided by Meyer, Mohaddes Associates, 2007

Table 3 presents the daily vehicle miles traveled (VMT) within the project area for the No Build and build alternatives. Alternative 1 would have less total VMT when compared to the No Build alternative. There would be approximately a 2 percent increase in VMT for Alternative 2 when compared to Alternative 1, due to the increase of capacity of the extended SR-103. The truck percentages of the build alternatives are similar to those of the No Build alternative within the same year. The percentage of port trucks is expected to increase between 2003 and 2030 while the percentage of other trucks is expected to decrease.

TABLE 3
Daily Vehicle Miles Traveled and Percentages within the Project Area

Project Alternative	Cars		Port Trucks		Other Trucks		Total VMT
	Daily VMT	Percent of Total VMT	Daily VMT	Percent of Total VMT	Daily VMT	Percent of Total VMT	
2003 - Existing	3,762,790	86.6%	446,582	10.3%	133,242	3.1%	4,342,614
2011 - Alternative 6 (No Build), Alternative 4	3,683,868	85.2%	509,987	11.8%	128,848	3.0%	4,322,704
2011 - Alternative 1, 1A, 3	3,696,964	85.5%	496,472	11.5%	128,981	3.0%	4,322,417
2011 - Alternative 2	3,857,134	87.3%	454,902	10.3%	105,845	2.4%	4,417,883
2015 - Alternative 6 (No Build), Alternative 4	3,867,096	83.9%	609,988	13.2%	131,813	2.9%	4,608,899
2015 - Alternative 1, 1A, 3	3,881,725	84.3%	593,061	12.9%	132,236	2.9%	4,607,023
2015 - Alternative 2	3,913,907	84.1%	604,778	13.0%	133,812	2.9%	4,652,497
2030 - Alternative 6 (No Build), Alternative 4	4,384,500	81.1%	874,743	16.2%	144,870	2.7%	5,404,114
2030 - Alternative 1, 1A, 3	4,407,170	81.6%	845,124	15.7%	146,453	2.7%	5,398,748
2030 - Alternative 2	4,436,443	81.5%	858,343	15.8%	146,750	2.7%	5,441,537

Data provided by Meyer, Mohaddes Associates.

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An increase of $PM_{2.5}$ emissions would occur if the project significantly increased VMT in the project area, and at locations where there are more traffic delays. The traffic delays would occur at the intersections where vehicles are accumulating and idling. It is unlikely that $PM_{2.5}$ hot-spots would be associated with the proposed action because local accumulation and delay of vehicles would be reduced by the project. Table 2 shows that LOS improves with the build alternatives when compared to the No Build alternative. Potential localized $PM_{2.5}$ increases associated with this slight increase in VMT would be offset by the increase of vehicle speed in the project area, which is an indication of reduced congestion and idling of vehicles. Thus, the project is not expected to cause any concern with respect to localized concentrations of $PM_{2.5}$ (see the following sections for more detailed emission calculations).

In conclusion, reviewing the existing and projected traffic conditions has shown that the Proposed Action would improve the operations of the intersections and increase the vehicle speed in the project area. It is unlikely that $PM_{2.5}$ emissions associated with the Proposed Action would cause significant adverse impact to air quality.

Direct Operational Emissions – Vehicle Operational Emissions

To further illustrate that the proposed project would not cause significant adverse impact to the ambient air quality, vehicle operation emissions of $PM_{2.5}$ were estimated and compared with the No Build alternative. The emission analysis was performed for the entire project study area because the proposed improvements along the Schuyler Heim Bridge, SR-47, or SR-103 corridors would likely affect vehicle traffic patterns on other nearby roads, not just along the roadways with proposed improvements. As a result, traffic conditions and vehicle emissions would be affected by the project in a broader area. The project study area includes the area between Interstates 710, 110, 405, and Ocean Boulevard.

Vehicle Exhaust Emissions

$PM_{2.5}$ emissions from vehicles traveling in the project study area were calculated for the years 2003, 2011, 2015, and 2030. Daily VMT data for 2003, 2011, 2015, and 2030 were provided by Meyer, Mohaddes Associates. $PM_{2.5}$ emissions were estimated for Alternatives 1, 1A, 2, 3, and the No Build alternative (Alternative 6). Emission factors for $PM_{2.5}$ were obtained from EMFAC2007 (CARB, 2007). Emissions were calculated based on three major categories of vehicles: autos, heavy-duty trucks (regional), and port trucks. Emissions from autos were calculated using EMFAC2007 emission factors representing the Los Angeles County vehicle mix. To be conservative, $PM_{2.5}$ emissions from regional and port trucks were calculated using the EMFAC2007 emission factors for heavy-duty diesel trucks. The emission factors selected from the EMFAC2007 results were based on the vehicle speeds shown in Table 4.

TABLE 4
Average Speeds

Project Alternative	Average Speed
2003 - Existing	41
2011 - No Build	47
2011 - Alternative 1	48

TABLE 4
Average Speeds

Project Alternative	Average Speed
2003 - Existing	41
2011 - No Build	47
2011 - Alternative 2	48
2015 - No Build	45
2015 - Alternative 1	46
2015 - Alternative 2	46
2030 - No Build	37
2030 - Alternative 1	39
2030 - Alternative 2	39

Data provided by Meyer, Mohaddes Associates.

As shown in Table 5, $PM_{2.5}$ emissions from Alternatives 1, 1A, 2, and 3 would be slightly lower than those from the No Build alternative. The emissions in Table 5 were conservatively estimated based on the average vehicle speed for the entire project area. The emission decrease for Alternatives 1, 1A, and 3 are due to a predicted decrease in VMT in the study area and an increase in vehicle speed for 2011, 2015, and 2030. Although there would be a slight increase in VMT for Alternative 2, due to increased capacity from the extension of SR-103, the $PM_{2.5}$ emissions for Alternative 2 in 2011 and 2030 would still be less than the No Build alternative. However, in the year 2015, there would be a greater number of "other truck" VMT (see Table 3) for Alternative 2 which would result in slightly higher emissions when compared to the No Build alternative. Emissions of Alternative 4 are predicted to be the same as those for the No Build alternative because the VMT and vehicle mix in the project area is predicted to be the same. Emissions associated with Alternative 5 were not discussed in this analysis because there is no traffic information available for Alternative 5.

TABLE 5
Daily Vehicle Emissions for the Project Study Area

Year	$PM_{2.5}$ (lb/day)				
	No Build	Alternative 1, 1A	Alternative 2	Alternative 3	Alternative 4
2003	901	--	--	--	--
2011	669	665	632	665	669
2015	577	574	582	574	577
2030	455	441	445	441	455

Emissions estimated using EMFAC2007, version 2.3 and traffic data provided by Meyer, Mohaddes Associates.

Overall, $PM_{2.5}$ emissions of the build alternatives would be the same or less than the No Build alternative. In addition, the exhaust emissions in 2030 would be much lower than those in 2011 (project opening year), attributed to the addition of newer vehicles with greater emission controls in future years. Based on the current ambient $PM_{2.5}$ concentrations in the project area, the project is not expected to have significant localized $PM_{2.5}$ concentration increase when compared to the No Build alternative.

Re-entrained Road Dust

Re-entrained road dust was estimated based on VMT and Chapter 13.2.1 of *AP-42, Fifth Edition, Compilation of Air Pollutant Emission Factors* (EPA, 2006). The emission inventories presented in the SCAQMD 2007 AQMP show that emissions from paved roads is the single largest contributor to the directly emitted $PM_{2.5}$. According to the PM Guide, $PM_{2.5}$ emissions from re-entrained road dust must only be considered if the EPA or state air agency have made a finding that these emissions are a significant contributor to the $PM_{2.5}$ problem in a given area (40 CFR 93.102[b][3]). Since the SCAQMD 2007 AQMP is incorporated as part of the California 2007 SIP, $PM_{2.5}$ from re-entrained roads was included in the hotspot analysis.

Table 6 presents the paved road emissions for the years 2003, 2011, 2015, and 2030. The $PM_{2.5}$ emissions for the build alternatives would be the same or less than the No Build alternative for each year analyzed. Paved road emissions are expected to increase with time because the calculation of paved road emissions is based on VMT and vehicle weight. Since the VMT and the percentage of trucks are predicted to increase with time, the paved road emissions would also increase with time. This finding is consistent with the emission inventories reported in the SCAQMD 2007 AQMP, which also shows paved road emissions increasing with time. Since paved road emissions are included in the 2007 AQMP, which is part of the California SIP, paved road emissions have been accounted for as part of the $PM_{2.5}$ attainment plan. Therefore, the proposed project is unlikely to cause new violations or increase the frequency or severity of any existing violations, or delay timely attainment of the $PM_{2.5}$ NAAQS.

TABLE 6
Re-entrained Road Dust Emissions for the Project Study Area

Year	$PM_{2.5}$ (lb/day)				
	No Build	Alternative 1, 1A	Alternative 2	Alternative 3	Alternative 4
2003	6,430	--	--	--	--
2011	7,182	7,010	6,181	7,010	7,182
2015	8,448	8,232	8,393	8,232	8,448
2030	11,941	11,554	11,724	11,554	11,941

Emissions estimated using AP-42 Section 13.2.1 and traffic data provided by Meyer, Mohaddes Associates.

Overall, $PM_{2.5}$ emissions of build alternatives would be the same or less than the No Build alternative. In addition, the exhaust emissions in 2030 would be much lower than those in

2011 (project opening year), attributed to the addition of newer vehicles with greater emission controls in future years.

Conclusions

This project is identified as a Transportation Control Measure (TCM) project in the RTP and RTIP; and its timely implementation is a crucial element in reduction of air pollutant emissions from roadway transportation sources. Overall, $PM_{2.5}$ emissions of the build alternatives would be the same or less than the No Build alternative. In addition, the exhaust emissions in 2030 would be much lower than those in 2011 (project opening year), attributed to the addition of newer vehicles with greater emission controls in future years. Based on the current ambient $PM_{2.5}$ concentrations in the project area, the project is not expected to have significant localized $PM_{2.5}$ concentration increase when compared to the No Build alternative. The proposed action is unlikely to cause new violations or increase the frequency or severity of any existing violations, or delay timely attainment of the $PM_{2.5}$ NAAQS. Therefore, the project meets the conformity hot-spot requirements in 40 CFR §93.116 and §93.123 for $PM_{2.5}$.

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4.6 PROJECTS REQUIRING FOLLOW-UP

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	39	64.4/71.5		

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN LOS ANGELES COUNTY NEAR GLENDORA FROM 2.9 KM TO 5.5 KM NORTH OF CRYSTAL LAKE ROAD AND FROM 1.7 KM SOUTH OF ANGELES CREST HIGHWAY TO ANGELES CREST HIGHWAY AND AT JUNCTION OF ROUTE 2 AND ROUTE 39

To be supplemented by Standard Plans dated July, 1999

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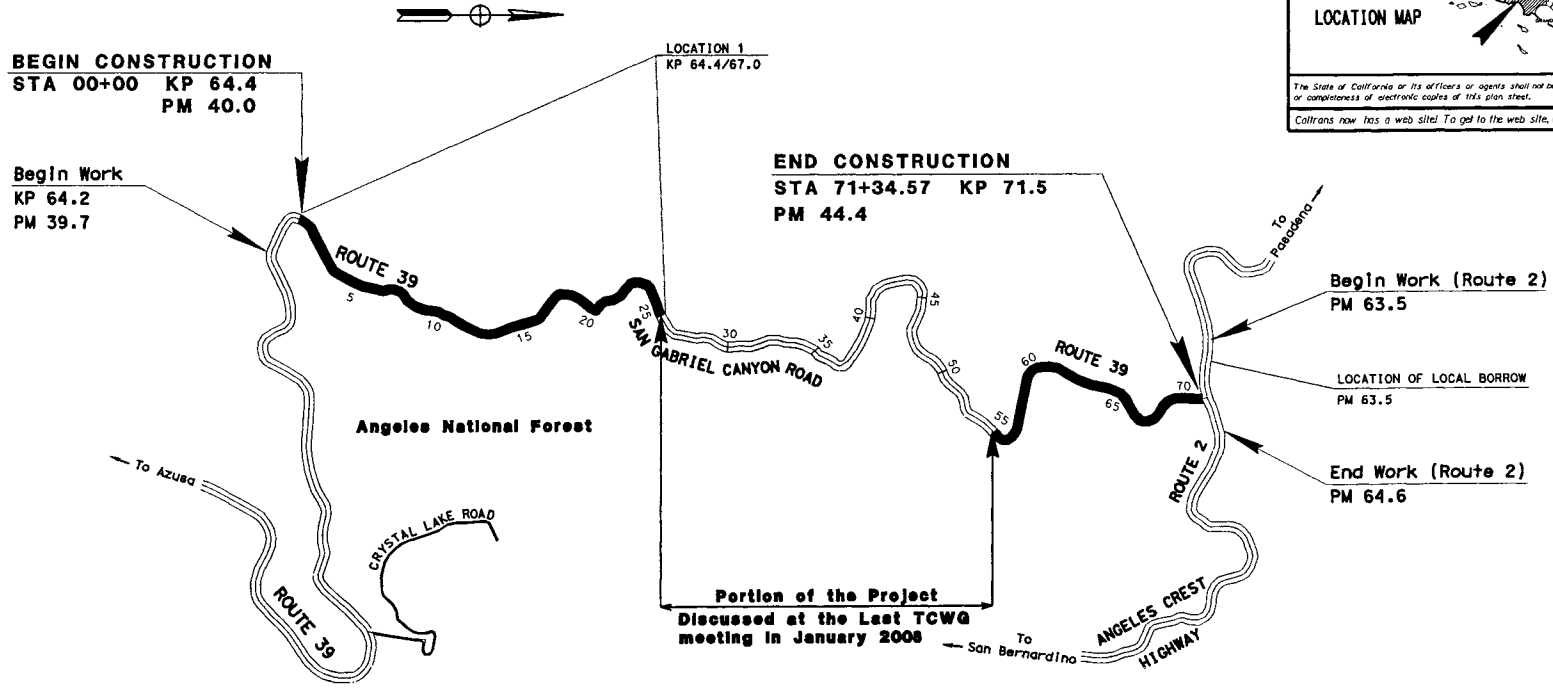

Discussion of Transportation Conformity Requirement Only

PROJECT ENGINEER | DATE | PROJECT MANAGER | DATE

07-133204

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CU 07274 EA 133201

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